

AMERICAN NURSERYMAN

The Nurseryman's Forte: To Make America More Beautiful and Fruitful

Exper. Staff

JANUARY 1, 1946

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VOL. LXXXIII, No. 1

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AMERICAN NURSERYMAN

F. R. KILNER, Editor

Editorial

HAPPY NEW YEAR!

This year the wishes for a happy and prosperous twelvemonth ahead are cherry and full-hearted, unclouded by the wartime apprehensions of the past four year-ends. If the son or daughter is away from home, the question is when he or she will return, not if. There may be some clouds on the industrial horizon, but why would there not be after so protracted a period of hostilities the world over? No longer do we wonder how the issues will be resolved, and at what cost. We can have assurance that time and patience will put our country back on the high road to prosperity, in which all may join.

The outlook is particularly bright for the nurseryman. He perhaps has unfilled orders for planting sufficient to fill another season. He can be sure of a large volume of business when home building gets under way. He knows that the public is more interested in gardening than ever before, and that its knowledge has been increased by the victory garden program during the war years. Ahead is a period of business expansion and opportunity, the success and extent of which depend upon our ability to meet the needs of the public as they should be met.

Conscious that an industry which has come through the war years with so fine a record can meet the problems of peacetime and rise to the opportunities ahead, our sincere wish to all is a very happy and prosperous new year!

MIDWINTER MEETINGS.

Already the reports of state association meetings have begun to appear in these columns, and the number will increase during the first two months of the year. Unquestionably many more nurserymen will attend the association meetings this winter than for several years, for travel restrictions are ended and everyone wishes to compare notes on the season ahead, with its problems and opportunities.

Many others will benefit from the meetings only through the reports in these columns. All will contain some information and ideas of value to every reader, whether the report

is of a meeting in your own state or elsewhere. They are selective reports, written not for the mere record, but for the purpose of passing on ideas and information for the benefit of the trade at large. Scan these reports, and see in how many places, here and there, you find items for your consideration, throwing light on your own opportunities and providing material for earnest thought.

THE ROLE OF ADVERTISING.

For a long time those closest to its operations have known that the value of advertising was more than the mere production of a sale, that those who thought of advertising only as a priced offer to produce a purchase were not fully realizing its opportunities.

Under war conditions, when merchandise was scarce and many large corporations had nothing to sell the public, advertising demonstrated its ability to do other things than provide an immediate stimulus to sales.

The war years developed some outstanding examples of the so-called institutional advertising campaigns. A corporation that sells canned vegetables told housewives through advertising how to grow and can vegetables at home. Meat packers bought space to explain to housewives how to get the most out of a pound of meat. One large refrigerator manufacturer told its own customers and those of competing manufacturers how to get the utmost use from their equipment.

Everyone recalls the successful wartime advertising campaigns of the railroads, to inform the public of their war activities, to solicit public understanding of their problems and to picture the railroads not as mere corporations, but as organizations of persons doing a highly important job.

While advertising will continue to be salesmanship in print, the definition becomes larger than mere sales production; it embraces the education of the public and fostering its good will.

No industry has a better opportunity to win the confidence and esteem of the public in this direction than our own. Many of our problems, such as rush seasons, unwise choice of varieties, careless planting and negligent maintenance, can be overcome by proper instruction of the public, after the fashion of the

wartime advertisers mentioned above. The public relations program of our national association includes some projects in that direction. Much more needs to be done, and the individual nurseryman can accomplish much in his own locality if he appreciates the influence and value of advertising for that purpose.

INDUSTRIAL LANDSCAPING.

In recent years factories and even office buildings have been built on the outskirts of cities or even in suburban or rural areas, and some of them have been made inviting to employees, as well as visitors, not only by the interior accommodations, but also by exterior adornment through the nurseryman's efforts. This type of activity has come to be called industrial landscaping, and there is ample evidence that the ground has only been scratched in its development.

More such factories will be built in the postwar era, and whether they show barren walls of brick to passers-by or whether they are attractively enhanced by trees, shrubs and lawns will depend upon how well the officers of the corporations are informed as to opportunities in that direction. Some only learn of it by visiting another establishment which has become a show place.

Two national associations of nurserymen are planning brochures and other informative material on this subject. Pictures will tell more than words about industrial landscaping. If you have photographs of any such job you have done, they will be a welcome contribution to promotion of this phase of the business.

CHRISTMAS TREE AID.

How to make a well balanced Christmas tree from a scrubby tree was a problem solved by the invention of a Chicago marine, Sgt. Richard Doherty, who is now on his way home from the Pacific. The device, which is now being manufactured in Chicago, is made from a 15-mm. primer from a naval shell. A screw is inserted so that it sticks out from the closed end of the small tubelike primer. It is then screwed into the trunk of the tree. A small branch inserted into the tube's open end makes a branch where nature forgot to put one.

Black Mold Disease of Manetti Rootstock

By J. A. Milbrath, Oregon State College

A black mold disease, caused by the fungus *Chalaropsis thielavioides*, has been reported as causing considerable damage to a number of different plants of interest to nurserymen. This disease is unusual in that it develops only on cut, broken or bruised tissue, usually at a time when the plant is in a dormant condition. In England it was reported as a serious disease of walnut grafts. The mold grew between the scion and the of Chinese elm in the shelter belt project of the midwestern states. There it grows on the broken and injured roots, killing many of them during storage, and when the trees are planted they fail to strike root and establish themselves.

Interest in this disease on Manetti rose rootstock developed a few years previous to 1938, when it infested propagation frames in greenhouses, causing a layer of black mold to form between the Manetti rootstock and the rose scion. This prevented normal callus formation, and the grafts failed to take. In 1940 this same disease was reported to have infected the Manetti stock of a California nurseryman, and when this stock was budded the mold developed between the bud shield and the rootstock and the bud died. A similar situation occurred in Oregon in 1941. When a block of Manetti was dug for dormant buds, more than fifty per cent of the buds were dead. An examination showed that this black mold was present under the shield of nearly every dead bud. In 1942 one nurseryman in Oregon destroyed 300,000 disbudded Manetti cuttings just previous to planting because they had become infested with black mold. When another 200,000 cuttings from the same lot were planted, such a poor stand and poor growth developed that they were not budded. The mold grows over the cut ends and covers the areas where the cuttings have been disbudded. This mold prevents normal callus formation and very poor roots, if any, develop.

The control of this disease can best be brought about by preventing infection. Preventing infection will be difficult unless the nature of this disease is understood and every precaution taken to keep it from contaminating the planting stock. Once this disease is introduced into a storage house and begins to develop on injured roots or cuttings, millions of spores are produced and these soon

get on all the equipment, floors, storage bins, etc. When they come in contact with any susceptible host with injured tissue they develop the black mold and more spores are introduced. It soon becomes impossible to handle susceptible plant material without getting it contaminated. Once a storage house becomes infested, it is difficult to free it of the black mold fungus. If all plant material, including all plant debris, could be removed from the house, and all of the walls, floors, bins, equipment, etc., thoroughly washed down with a strong creosote or copper sulphate spray, perhaps most of the spores would be destroyed.

Since this fungus is a wound parasite, the probabilities of a Manetti mother block becoming infested are small. Therefore, if propagation wood taken from these blocks is handled in such a way that it does not become contaminated with black mold spores, the disease would be eliminated. This propagating material should be handled only in buildings not previously used for nursery stock, even if this involves securing a suit-

able building away from the nursery. Stock should be stored there until ready for planting. All equipment used in handling this material should be sterilized. The cuttings should not be hauled around on trucks or in boxes that might have been previously contaminated. The black mold fungus would probably survive in the soil for several years; clean cuttings should not be planted in soil previously used for Manetti roses. If the plants are to be sold as rooted Manetti, they should not be taken into contaminated storage houses for packing and grading. Likewise, clean packing material and packing boxes should be used. If the plants are to be sold as dormant buds or 2-year-old plants, no special precautions are necessary, once the bud has callused in. Apparently the fungus does not injure such plants in any way.

Many of the chemicals available for fungicidal purposes have been tested for their effectiveness against black mold. It has been found that the spores of the black mold fungus have about the same tolerance to these chemicals as the Manetti rose. Of all the chemicals tested, none have been found that would kill the black mold spores without injuring the treated plant. It seems impossible at the present time to dig infected Manetti plants, treat them and then ship them any distance and still have the plants safe to use for grafting purposes. However, there are several chemicals that should prove valuable as a wash just before grafting Manetti. The present work has not included this phase of the problem. Until some other suitable method is found for treating infected plants, it will be essential for nurserymen who plan to grow rooted Manetti for greenhouse grafting to keep their nursery free from black mold.

If cuttings are to be used for field budding but become contaminated with black mold before planting, it would be advisable to soak these cuttings in a two per cent Ceresan solution of one pound to 100 gallons of water for one hour. This will greatly increase the number of good plants obtained, as well as reduce the chance for contaminating the bud shield.

Summary.

In growing Manetti to be used as rootstocks for roses the following points should be remembered if the black mold fungus is to be controlled.



Fig. 1. The effect of black mold on callus formation. A. Injured end of manetti cutting two weeks after inoculation with black mold spores. B. Similar cuttings not inoculated with black mold spores. Note abundant callus formation along injured portion in B as compared to no callus in A.

1. Contaminating Manetti with the black mold fungus should be prevented whenever possible, because it is difficult, if not impossible, to clean up infested plants by chemical treatments.

2. Since the infections that occur when the cuttings are made play an important role in perpetuating the disease, steps should be taken to prevent this infection.

3. The black mold organism does not develop on active growing tissue; therefore, it is doubtful whether the mother blocks from which the cutting wood is taken would ever become infected.

4. Infection has been found to occur in the storage house from spores which have developed on infected rooted cuttings, dormant buds or 2-year-old rosebushes on Manetti roots. Multiflora rootstock is not susceptible to black mold.

5. Clean Manetti wood should never be taken into storage houses where infected plants have been handled. Likewise, no equipment that has been used in handling infected plants should be used in making Manetti cuttings.

6. The dormant spores of the black mold fungus probably live in the soil for several years. Clean cuttings should not be planted on ground previously used for Manetti rootstock.

7. All cuttings should be examined just before planting, for the presence of black mold. If even a single cutting is found to be infected in the bundle, that bundle should be soaked in a solution of 2 per cent Ceresan,

one pound in 100 gallons of water for sixty minutes. Do not use this solution stronger or longer than recommended or serious injury might occur.

8. Before attempting to disinfect storage houses, boxes, tools or other equipment, all dust and debris should be removed. The storage house walls, floors and ceilings should be thoroughly sprayed and other equipment sprayed or dipped in a copper sulphate solution prepared by dissolving one pound to each five gallons of water.

CHET MARSHALL HONORED.

Chet G. Marshall was elected president of the National Association of County Fair Boards at the annual meeting, held at Chicago the first week in December. Mr. Marshall, who is associated with Marshall Nurseries, Arlington, Neb., has for many years been actively interested in the development of county fairs. He has held many offices in state and local nursery and horticulture organizations. In 1937 he served as secretary of the northeastern Nebraska county fair circuit and of the Nebraska Association of Fair Managers.

Mr. Marshall studied horticulture and botany at the University of Nebraska for two years and in 1912 helped organize the Central Fruit Growers' Association. He was its manager for two years. For three years he was connected with the horticulture department at the university and was a member of the Nebraska

state park board from 1926 to 1928. He has served as president of the American Association of Nurserymen, of the Northern Retail Nurserymen's Association and of the Western Association of Nurserymen.

MINNESOTA HONORS.

The Minnesota State Horticultural Society, at its recent annual meeting, upon the recommendation of the awards committee and with the approval of the executive committee, honored E. C. Hilborn, of the Northwest Nursery Co., Valley City, N. D., with honorary life membership, for long time work in testing fruit and ornamental plants for the northwest.

Award of merit went to, among others, Robert Schreiner, St. Paul, for his iris originations; to E. H. Lins, Cologne, for peony originations, and to Melvin Bergeson, Fertile, for energetic and unselfish promotion of home beautification and fruit growing in the Red River valley. Mr. Bergeson was elected a director of the Minnesota State Nurserymen's Association at its annual meeting last month.

NEW YORK WINTER SCHOOL.

The 1946 midwinter school for nursery employees at the State Institute of Agriculture, Farmingdale, N. Y., will begin Monday, February 4, and extend through Friday, February 8. The addition of two days to the program time of last year will allow the inclusion of more laboratory and field demonstration sessions.

All subjects offered will be related to nursery operations. Among them are soil management, including analysis; care of equipment, modern plant materials, propagation from cuttings, seeding, layering and grafting; fertilizer programs for nursery and home plantings, and disease and pest control, also many other phases of nursery and landscape service.

The objective of this cooperative effort is to provide an opportunity for all nursery employees and smaller operators to get refresher courses and new ideas during the slack winter season. Those outside the commuting distance of Farmingdale are urged to make early application for the limited number of dormitory rooms available. Many nurserymen have already indicated their intentions of sending more than one man to attend. A request to Carl F. Wedell, State Institute of Agriculture, Farmingdale, N. Y., will bring you detailed information.

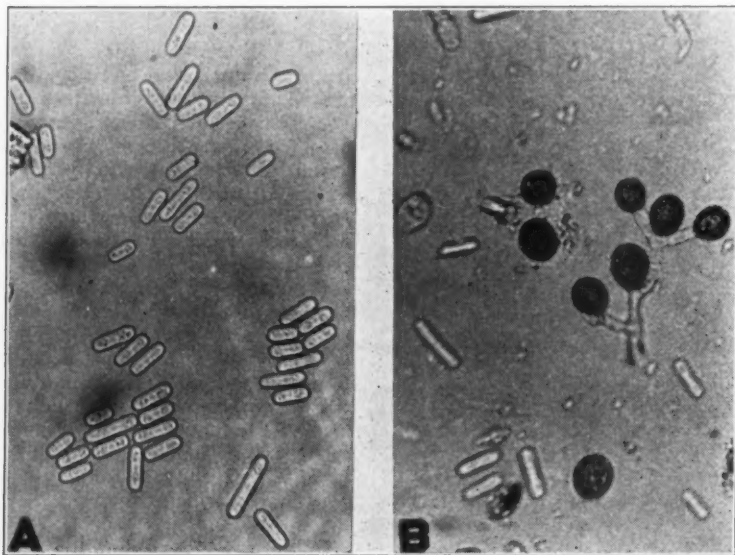


Fig. 2. The two types of spores produced by the black mold fungus. A. White endoconidia are produced in great numbers at first and later, B, the black macroconidia are formed, giving the growth its black color. The black spores are the resting spores that carry the fungus over unfavorable conditions.

Winter Identification of *Euonymus*

By Leon Croizat

Euonymus is an old denizen of our gardens, and twenty-five of its species are listed in the pages of Rehder's "Manual of Cultivated Trees and Shrubs." Eighteen of these key out as having deciduous or partly deciduous leaves, with seven as carrying foliage persistent throughout, with the exception of *Euonymus kiautschovicus*, which is half-evergreen.

This distinction is sound, and no better can be devised for practical purposes. It may be qualified, nevertheless, to the extent that *euonymus* is a genus in which tendencies count for quite as much as hard and fast characters. Barring some of the forms native to colder Asia, this group tends to retain its foliage well into the late fall, and under warmer skies even longer. As persistent foliage, therefore, we must understand foliage which is definitely so, leathery and thick to fairly thick as a rule.

As far as winter identification is concerned, the eighteen species which lose their foliage fall into three groups, two of which are as distinct as anything may ever be in *euonymus*. In one of these groups the buds are long and plainly pointed (Fig. 8), so formed that no one who is not familiar with these plants would identify their bearers as *euonymus*, or staff trees. To this group belong four species, *Euonymus sachalinensis* (*Euonymus planipes*), *Euonymus latifolius*, *Euonymus sanguineus* and *Euonymus oxyphyllus*, which we shall take up in detail at the end of this article. With us they are desir-

able and thrifty shrubs, and welcome additions to the garden, both on account of their foliage and their fruit. If they have a drawback, this is in the pungent odor of the flower of certain forms, and in the fact that the fruit is not long-lasting. *Euonymus latifolius*, moreover, may get scaly.

The remaining fourteen species have short or fairly short buds, and at any rate buds which are not a match of those of the four species mentioned above. The basic bud patterns in this group are two, and we might as well refer to figures to avoid lengthy descriptions. Certain species come close to the type of bud of Fig. 1 (example: *Euonymus yedoensis*), others to that of Fig. 2 (example: *Euonymus obovatus*). It will readily be noticed that the habit is different—short and rounded in one case, rather pointed in the other.

Among the species in cultivation, *Euonymus europaeus*, *Euonymus maackii*, *Euonymus hians*, *Euonymus yedoensis*, *Euonymus bungeanus*, *Euonymus lanceifolius* and *Euonymus nikoensis* have buds agreeing with the pattern shown by Fig. 1. The pattern in Fig. 2, on the contrary, occurs in *Euonymus obovatus*, *Euonymus americanus* and, with more or less relevant modifications, *Euonymus verrucosus* and *Euonymus atropurpureus*. The very common *Euonymus alatus* agrees in the main with the type exhibited in Fig. 1, as we shall see.

Characteristic of the bud scales

of *euonymus* in general is the presence of a toothed or frayed margin. This toothing and fraying may be more or less well marked, sometimes barely noticeable under a good pocket lens. Its presence is readily explained. The stipules of *euonymus* are of the bunched or kinky type which we have seen in *celastrus* and *pachistima* (see preceding article) and take little or no part in the making of the bud scale, which, accordingly, is a whole reduced leaf. If we take a twig of the dwarf forms of *Euonymus fortunei*, the so-called *Euonymus radicans nanus*, for example, we readily observe (Fig. 3) that the teeth of the bud scale are immediately derived from those of the leaf. This is an important observation, because the peculiar nature of the margin of the bud scale of *euonymus* has often been emphasized in winter identification—and this rightly so—without having ever been rationalized as to its origin. We shall see how this seemingly fleeting character is intimately connected with relevant peculiarities of the foliage in this group.

If now we seek characters of a practical nature to identify the *Euonymus europaeus* aggregate (Fig. 1), we shall find: (1) The shoot of the year tends to be quadrangular on account of marked ribs running down from the leaf scars. These scars are opposite or nearly opposite, with barely noticeable blackish stipules or, more correctly, with the remnants of these stipules set where the ribs begin their downward course. (2) This shoot is smooth, pale green at first, later turning dark purplish to brownish. The color varies even in the same species, but tends to remain green in certain forms (witness, *Euonymus yedoensis*,

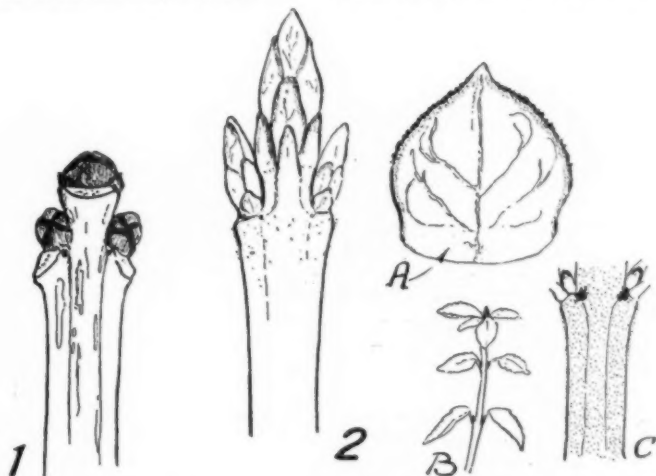


Figure 1.—*Euonymus yedoensis*.

Figure 2.—*Euonymus obovatus* and its apical buds; A, a bud scale. *Euonymus fortunei minimus*: B, habit sketch; C, part of a twig seen from the side.

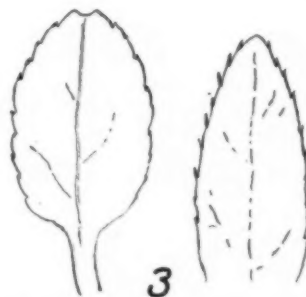


Figure 3.—*Euonymus fortunei minimus* (*Euonymus radicans nanus*): bud scale at right; leaf at left.

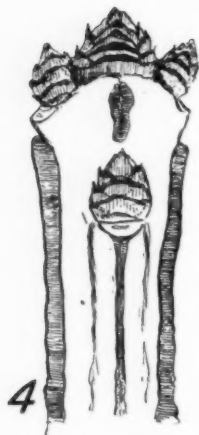


Figure 4.—A free-grown shoot of *Euonymus alatus*, with wings.

Euonymus lanceifolius), while it readily becomes purplish in others (example: *Euonymus hians*). In *Euonymus nikoensis* the year growth develops early patches of light yellowish to brownish smooth bark. (3) The bud scales are few, definitely opposite in pairs. Their body is the same color as the twig, either green or purplish, but the margin is brown, more or less toothed or frayed. The contrast is usually sharp between the margin and the rest of the scale. (4) In most cases the growth is waxy, more abundantly so in the fall than in late winter. Tiny flakes of wax are commonly found at the base of the first bud scales, below the leaf scar and in the folds of the ribs. *Euonymus yedoensis* is more waxy perhaps than other species in this group, but traces of wax may be looked for throughout in this aggregate. (5) In mature plants and on shoots of sizable length, the lower leaf scars are budless, because it is here that the flowers are borne, and later the fruits which fall without leaving vegetative buds behind. (6) The growth is stouter in certain species than in others and is comparatively delicate in *Euonymus bungeanus* and *Euonymus maackii*, which are frequently cultivated.

It proves unfortunate that *Euonymus europaeus*, a beautiful shrub in fruit, should be the easy prey of a most obnoxious brand of scale. Certain forms of it are more liable to the inroads of this pest than others, and careful selection might eliminate it altogether by developing resistant stock. However, nothing much seems to have been done so far in this direction, and *Euonymus europaeus* had better not be grown commercially. The scale it harbors happens also to spread to other species which under normal conditions are tolerably safe.

It is commonly believed that a staff tree bearing corky wings is necessarily *Euonymus alatus*. This is not correct, because forms in the close affinity of *Euonymus europaeus*, *Euonymus bulgaricus* for example, may be quite as strongly winged as *Euonymus alatus* itself, and these forms will readily get the scale, which does not attack *Euonymus alatus* as a rule.

Ironclad identifications of the winged forms of euonymus are readily made on the strength of the fruit, but better than average guesses can be made on free-grown shoots and their buds, particularly so if main leaders are studied. In all forms of *Euonymus alatus*—including its wingless aspects, known as *Euonymus alatus apterus*—the bud approaches the type illustrated by Fig. 1, but exhibits marked peculiarities of its own, on the other hand. The tiers of bud scales are more than three, even four



Figure 5.—Tip of shoot of *Euonymus phellomanus*.

or five (Fig. 4), and the bud scales are of the same brown color throughout, if slightly darker at the margin. This margin is much frayed and jagged, so much in fact as to crumble readily. The tip of the scale tends to be straight. These characters are less manifest on weak than on robust shoots, but they are altogether such as to stand out most markedly. *Euonymus phellomanus*, for example, which is winged, and better than winged in certain corky forms, has buds (Fig. 5) which are reminiscent of *Euonymus europaeus* and its group. The wings of euonymus (Fig. 6) cannot be confused, whatever be the species involved, with those of elms or similar plants on account of the opposite leaf scars. The blue ash, *Fraxinus quadrangulata*, which has opposite leaf scars, too, carries stouter and lower wings, horseshoe-shaped

leaf scars and grayish to brownish bark.

Euonymus obovatus, one of our native shrublets, has a pointed bud (Fig. 2), as we have already learned. The tips of the twigs may be somewhat hairy, but the hairs readily shed. The color is green, and the ribbing on the side of the branchlet is barely noticeable. Inspected at close quarters, the individual bud scale is readily seen to be veined (Fig. 2, A) in the manner of a leaf and finely toothed at the margin. We know by now what this means; this bud scale is a much-reduced dormant leaf, and were the growth to be free, and the scale fully developed, we no longer would have before us an euonymus with deciduous leaves, but a full fledged evergreen. If we study carefully a sprig of the common *Euonymus fortunei* (the so-called *Euonymus radicans*), for instance, we shall find (Fig. 2, C) much in it reminiscent of *Euonymus obovatus*—fine warts or minute hairs, weak ribs, toothed leaves quite unlike those of cultivated periwinkles and blackish and minute stipules in spots. In *Euonymus kiautschovicus* we shall have, as a matter of fact, a perfect transition between the vegetative characters of the full evergreen *Euonymus fortunei* and the deciduous *Euonymus obovatus*. *Euonymus kiautschovicus* is practically evergreen throughout, like *Euonymus fortunei*, but its leaf is pointed at both ends in the usual pattern of euonymus and less leathery.

The bud scales of all these species and forms, quite as much as those of *Euonymus americanus*—a deciduous ally of *Euonymus obovatus*—bear a revealing leaflike venation. This



Figure 6.—Typical wings of euonymus.

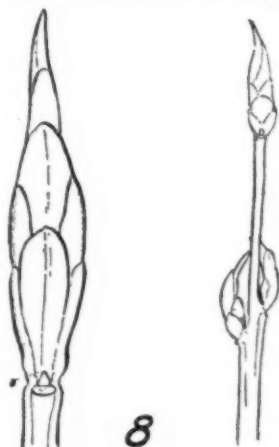
Figure 7.—*Euonymus verrucosus*.

venation is marked in *Euonymus obovatus* and *Euonymus fortunei*, particularly so on the outer scales, and more obscure in *Euonymus americanus*. The margin of the scale is more or less toothed, sometimes barely so, and not thoroughly chaffy, which we may explain if we realize that we stand at the crossroad where leaf and bud scale meet, the leaf itself being checked in its growth and adapted as it were by endless degrees. Accordingly, the bud characters in this group are more of a negative than a positive quantity, but such after all in their implications that we are bound to grant them attention on general grounds. *Euonymus verrucosus*, readily identified from its warty twigs (Fig. 7), has buds of this pattern—that is, pointed, but the margin of the bud scale is brown and chaffy, quite unlike the green body of the scale, and this time toothless or nearly so. Once again we can understand the why of these characters and use them to a telling purpose, but were we bound by mere descriptions and conventional keys, we could not give ourselves any reason why the margin of the bud scale is correctly emphasized in the winter identification of euonymus and is at the same time so variable as to defy the power of words. In truth, this margin is the equivalent of the side of a leaf, and depending on whether it has been adapted fifty, seventy-five or 100 per cent, it turns out to be translucent, chaffy, markedly toothed, hardly toothed or smooth throughout and brownish or yellowish.

Knowing this, we are safe in assuming that we are no longer to face an insoluble riddle in the four species of euonymus with long-pointed buds. They look nothing like the groups we have reviewed so far, but they merely exaggerate the tendencies which we have seen at work in the aggregate represented by *Euonymus obovatus*. Let us notice in a practical vein that

these long-pointed forms (Fig. 8) suggest the rosaceous aronias and amelanchiers, but, while they may have occasional alternate buds, they still are, as a rule, opposite-leaved and faintly ribbed at the twig in the euonymus manner. The new growth is brownish or purplish, seldom and then only in part greenish; the stipules are reduced to minute black scars, and if no wax can be seen, the feeling from rubbing young bark is just like rubbing wax.

The length of the apical bud differs in comparable shoots—that is, in growth of the same vigor. In *Euonymus sachalinensis* (*Euonymus planipes*) this bud is up to one and one-half inches long; in *Euonymus latifolius*, not over one and one-quarter inches; in *Euonymus macropterus*,

Figure 8.—Right: Tip of shoot and buds of *Euonymus macropterus*; left: terminal bud of *Euonymus sachalinensis* (also called *Euonymus planipes*).

about one inch, and in *Euonymus sanguineus*, from one-half to three-quarters of an inch. These figures are averages, but the tendencies they indicate are noticeable, and the last looks altogether unlike the first.

If we section a bud of *Euonymus sachalinensis* (Fig. 9) we have before us a full-fledged twig in miniature, down to side shoots and leaves in full readiness to start growth all over again. This arrangement, as a matter of fact, is the counterpart of an evergreen branchlet cut to size and fit to be incased within certain bud scales which, naturally, cannot be very short. These bud scales are obscurely veined in the manner of a leaf, too, but their midrib is mostly thrown on the side of the scale, which conveys at least a hint of spiral whorling. Some of the scars of these scales, such as can be seen for example at the beginning of the year's growth, are not perfectly opposite, either.

The tale, then, which is revealed

by this and other buds is simple. We had in origin in this family a whorled pattern of foliation, involving probably a half-dozen leaves in every whorl. In *Celastrus* this whorl has been fully decomposed leaf by leaf, which is to say that each leaf has found its place between two of its sisters, one below and another above. This has given us an alternate pattern, the leaves of the original whorl being scattered at regular intervals alongside the growing shoot. In euonymus, on the contrary, the primitive whorl of foliage has been dissolved by pairs, which gives us sets of opposite leaves. The controlling factors of this arrangement work precisely in the dogwoods, for instance, but are not wholly stable in euonymus, which accounts for the fact that certain pairs of leaves may not be truly opposite. This is also true of *pachistima* (see preceding article), as we know, and in general of all the *Celastraceae* with opposite leaves.

In euonymus with short buds the check which takes place at the apical point of growth is sharp, and the leaves are abruptly turned into bud scales. In the four species with long buds, on the contrary, the check is more gradual, and the core of the bud behaves as though it were ready to get out of hand. It begins growth, as a matter of fact, but it is overtaken in the end and wrapped up by the scales. Lastly, in the group of *Euonymus obovatus* a transition takes place between the sharp manner of the first and the weak behavior of second group just described. The transformation of the leaf to become a bud scale is quite as gradual, which readily accounts for the fact that we see in the *Celastraceae* in general, and euonymus in particular, buds which endlessly differ in certain respects,

Figure 9.—Longitudinal section (diagrammatic) through apical bud of *Euonymus sachalinensis*.

but all hark back to the same standards. How could we understand all these details if we were in the dark about generalities?

To close, we may notice how easily the most diverse patterns can be brought down to a single standard of behavior. In the bittersweet the shoot grows on endlessly, its leaves becoming smaller and smaller toward the tip until such time as the shoot dies from exhaustion or is overtaken by winter. Plainly, some factor is at work checking growth in these shoots, for, were this not the case, the leaves would not get smaller, approaching the status of bud scales toward the tip of the shoot. However, the check is not strong enough to stop growth, but merely weakens it.

Were the check clean-cut instead of gradual, a bud would form. Growth in length would be arrested, and the leaves become full-fledged bud scales, tightly whorling around the inhibited growing point. Accordingly, a spindly branchlet of the bittersweet which pursues its aimless path upward is the potential counterpart of a terminal bud. Like an unruly child of weak parents, this branchlet grows almost unchecked to its own perdition. Were it stopped by an iron hand at the proper time and put to bed well tucked into bud scales, this same twig would safely winter out. We may well fancy that in the world of the fairies, and in the halls of the club where lady euonymus spins her yarns, much is heard about the misplaced kindness of lady celastrus. This lady is not without comeback, however, for in the halls of her own club, this time, she can point out that lady euonymus does things halfway and is not perfectly sure at times whether the two sides of her hat—pardon me, her leaves—are on the same level. We know by now something about both these ladies and may draw our own conclusions. The Celastraceae are indeed a most interesting family, and may we wonder that celastrus is found at home both in the cold north and the hottest tropics?

WHITE-FRINGED BEETLE.

The bureau of entomology and plant quarantine of the United States Department of Agriculture has published a revision, effective December 12, of quarantine 72, for the white-fringed beetle.

This revision of the quarantine and regulations is made primarily for the purpose of extending the regulated areas to include additional areas in which white-fringed beetle infestations have been located. New

counties, parts of which are included for the first time, are Coffee county, Alabama, and Bladen, Robeson and Union counties, North Carolina. Minor additions to the regulated area have been made in several other counties of Alabama, Florida, Mississippi and North Carolina. No change in the regulated area of Louisiana is made by this revision. This revision also places under regulation straw, plant crowns or roots for propagation, and uncleaned grass, grain and legume seeds.

NEW TYPE OF PLOW.

Details of a new-type plow expected eventually to make obsolete conventional-type plows were disclosed last month by officials of the Oliver Corp. at a press conference at Chicago.

The plow will enable farmers to rejuvenate their land, protect them against erosion and increase output with the same or less expenditure of manpower, said Alva W. Phelps, president. The implement already has shown in preliminary use on university experimental farms that it will contribute much to soil conservation and improvement, he said.

Designed by R. J. Altgelt, chief engineer of the Oliver plow division, the plow has additional bases set a few inches below and behind as well as to one side of the upper bases. The upper bases are adjusted to normal depth for conventional plowing. The lower bases, by widening and deepening the cut, crumble the plow pan, mixing it slightly with the lower portion of the topsoil. The amount of harrowing and disking is reduced.

On slanting fields, where gullying

or runoff is a problem, the plow is said to heighten acreage value because deeper tillage catches and absorbs the water which would otherwise wash topsoil downhill.

KEEPS OFF RABBITS.

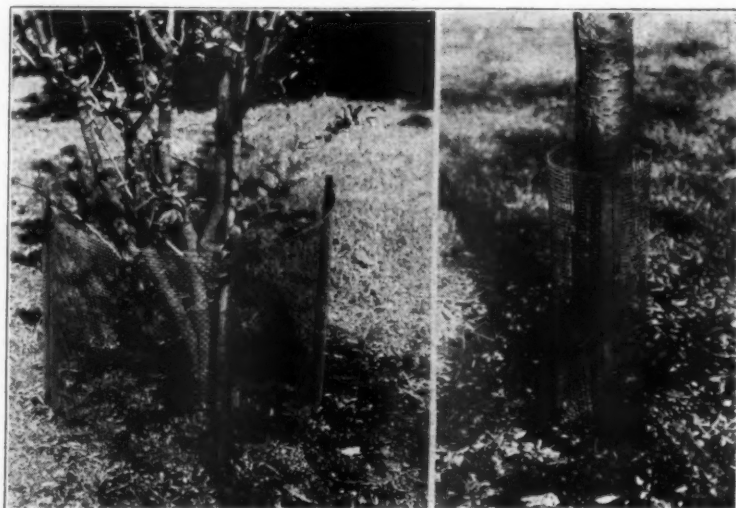
A new device to prevent damage by rabbits and other rodents girdling young trees and shrubbery, the Tre-Gard is a useful invention. This inexpensive guard is easy to handle and will last from five to ten years.

The Tre-Gard is made in one piece of 4-mesh galvanized hardware cloth. The cloth is attached to two metal stakes, which are equipped with a fastening device. It is eighteen inches high and six inches in diameter and is painted with green outdoor enamel for added protection.

With the lower ends of the stakes driven into the ground, the guard is held firmly in place, preventing rodents from digging underneath or raising or knocking it over. The guard may be quickly and easily set around a tree or shrub.

Some special advantages of this guard are that it allows sunlight and air to get to the base of the tree, and it offers no dark corners or shelter to encourage the hibernating and breeding of small rodents and insects. It may be used in continuous multiples around large ornamental shrubs and seedbeds and is neat in appearance. The manufacturer of Tre-Gard is Bushman-Moore, Inc., Cleveland, O.

CHESTER ROBINETTE, son of William Robinette, proprietor of the Robinette Nursery, La Fayette, Ind., has returned from overseas duty and will continue his father's business.



Tre-Gard, Made of Galvanized Hardware Cloth, to Repel Rabbits.

Beginning in the Nursery Business

IV. MAIL-ORDER NURSERIES (Continued)

By John J. Pinney

Mailing lists are best kept on card systems. By putting only one name on a card, such systems can be completely flexible so that additions and removals are simple and easy. There are several modifications of the card system. One of the best consists of a rigid stencil instead of the ordinary card. The essential information about the customer's account is recorded on the margin of the stencil which is made for that express purpose. The stencils are run through a machine for quick and accurate addressing of catalogs and other literature.

The most practical method of filing names in large numbers is to file first by states, then alphabetically by towns and finally alphabetically by surnames. Use index guides to aid in filing or finding names quickly.

On the customers' cards in your mailing list record the date and source of the original inquiry, if known, and dates and amounts of orders as received. This information will enable you to determine which advertising media result in the most business. Remember, it is not always the medium that pulls the greatest number of inquiries that proves the most profitable.

Many folks who ask for catalogs never become customers. After they have received two or three catalogs without ordering they should come off your list. Some firms with large mailing lists do not send more than one catalog unless the inquirer sends an order. You can reduce your selling costs materially by keeping your mailing list active and up-to-date. Established firms figure they have to sell a certain number of dollars' worth of merchandise per catalog to make the business profitable. The mailing of a lot of catalogs that result in no orders at all pulls down the average rapidly.

Your catalog is your salesman; as such it is your most important publication. The most skillfully built catalog is ineffective if sent to a poor mailing list; conversely, a carelessly written, poorly printed catalog will not produce the business you have a right to expect from a good mailing list. It is quite obvious, therefore, that for both the mailing list and catalog to be the most effective they must be the product of your best efforts.

Supplementing general pamphlets issued by governmental agencies and colleges instructing returned war veterans on opportunities and problems in starting their own business enterprises, this series of articles deals particularly with the nursery field. The various methods of sales operation are treated in separate articles.

While directed primarily to the returned veterans seeking to establish themselves in this business, the articles will be useful to others of limited experience.

Reprints will be made available for distribution to your sons or employees in service, or to others who might benefit. Just send names and addresses if you wish the articles mailed direct as they appear, or write the editor the number of reprints you would like for your own use. There is no charge—this service is contributed by the magazine in the veterans' behalf.

Good mail-order catalogs were printed in this country more than a century ago, but they were more in the nature of reference works. They merely listed the varieties with descriptions and did not make much attempt to sell the product. All that is changed today. With the modern developments in the art of color printing, the nurseryman is now able to illustrate his products in all their glory.

When you start to build a mail-order catalog, the first thing you do is to select the assortment that you want to offer. This is a highly important job because the nearer your offerings conform to what the public wants the easier your selling job will be. To illustrate: Suppose you are growing a certain little-known variety of shrub in large quantities or are able to buy it very cheap. You decide you can make a lot of money out of this shrub because of the low cost. The chances are you will find that they sell poorly even at a low price. A good illustration and a snappy description will help, but the space in the catalog probably will not pay for itself.

On the other hand, a shrub that is known to everyone, given the same amount of space, will outsell the unknown shrub several times over. Of course, you cannot fill your catalog with varieties of equal popularity, but try to pick out as many winners as possible. One way to do this is to analyze the catalogs of a number of successful mail-order firms operating in the same territory that you plan to cover. If a certain variety is listed in all or most of these catalogs, you

can be pretty sure it is a popular number. Your wholesale sources can also be helpful in aiding you to choose the best varieties. You must make sure that the varieties you select for listing are available.

Make your descriptions brief and to the point. No one likes to read long, detailed dissertation. Put yourself in the customer's place. Try to figure out what he wants most to know about your product, and then tell him in your most interesting manner. Stick to the truth; do not exaggerate. Just as in advertising, a straightforward statement is most effective.

Use numerous illustrations. A good picture is your best sales help. You have noticed how the large mail-order houses illustrate as many of their articles as they possibly can. Illustrations should be clearly captioned so that there will be no doubt in the mind of the observer. Consider the use of 4-color illustrations. There probably is not any other product that lends itself more readily to the use of color than nursery stock. Many mail-order nursery catalogs are things of beauty with their gorgeous illustrations in full color. More and more firms are employing color in their catalogs, and many catalogs are illustrated entirely in color.

Among the largest single items of cost in the production of a catalog are the composition and make-up. Composition is the setting of your copy into type. Any mistakes in the original copy that you supply the printer will have to be corrected later. Making corrections after the type has been set is expensive. Therefore, you should prepare your copy carefully to eliminate as many mistakes as possible.

Make-up is the work of assembling the type and the cuts (illustrations) for printing. The type has to be arranged in pages and the cuts have to be put in their proper places and captioned. By providing accurate and not too complicated page layouts you can save the printers' time and yourself money.

If the catalog is to be printed in colors, the paper has to go through the press four times. It takes great skill to register the four impressions so accurately that the resulting illustrations will be sharp and clear-cut. When you see fuzzy and blurred

color pictures you know that there was a sloppy job of press make-ready, another important step in the job.

These matters of composition, page make-up and press make-ready have been explained so that you will understand why the cost of only a few thousand catalogs is high compared to the cost of many thousands. After the initial investment has been made in composition and make-ready, the cost per catalog drops rapidly as the number printed increases. The cost of composition and make-ready is practically the same for 10,000 catalogs as for 100,000. As your mailing list increases, your catalog cost per unit should drop.

If you do not feel equal to the task of preparing your own catalog, you can get help from an advertising agency. You supply the agency with the basic information, and its staff lays out the catalog and writes the copy. You can also obtain valuable assistance from the catalog printers themselves. The more up-to-date firms maintain layout departments for the benefit of their customers.

Do not try to cut cost by using cheap paper in your catalog. The saving in the cost of the paper will make little difference in the cost of the catalog, but will make a big difference in its appearance.

There is a widespread impression that mail-order nursery stock is inferior merchandise. Of course this is erroneous. True, there are some mail-order nurseries that offer only poor stock at a low price, but they are the exceptions. Our advice to you is to build your business on quality. Give your customers high-grade merchandise, charge a fair price for it, and you will be building your business on the soundest possible basis.

Do not worry about competitors who may be underselling you. Price, taken alone, is a poor criterion by which to judge nursery stock. Poor stock that fails to grow or gives indifferent results is costly at any price. On the other hand, strong, healthy, well graded trees and shrubs and plants can command good prices. There are plenty of people willing to pay fair prices for good stock.

Let us tell you about experiences of two successful mail-order nurseries. One of them sells small-size stock at low prices. The other offers only good grades at much higher prices. Both have been operating for many years and cover much the same territory. Each mails out several hundred thousand catalogs every year. The first firm has such a big turnover among its customers that it must follow an intensive advertising program

year after year in order to maintain its volume of business. The other company has been able to reduce its advertising budget materially without experiencing a falling off in business. Its customers are so well pleased

[Concluded on page 37.]

FRANK A. DOERFLER.

Prior to becoming a nurseryman, Frank A. Doerfler, the vice-president and membership chairman of the Oregon Association of Nurserymen, was a successful livestock farmer in the Willamette valley of Oregon, where he was born and raised. During his career devoted to raising purebred registered livestock, Mr. Doerfler raised one of the eight world-record Jersey cows for butter produc-



Frank A. Doerfler.

tion and for several years sent a flock of Shropshire sheep on a show circuit through the eastern states. For eight years he was farm adviser for the First National Bank of Salem.

In 1930 Mr. Doerfler bought out a small nursery and started in the nursery and landscape business with his two sons, Wally and Don. Wally was in the army for nearly four years, and Don was engaged in essential government work for over three years, but both boys are now back at the nursery in partnership with their father.

The nurseries of F. A. Doerfler & Sons, Salem, consist of four acres of closely planted stock, with 10,000 camellias and rhododendrons, 5,000 boxwoods, 1,500 green-leaved aucubas and 1,000 nandinas. Dwarf and rare kinds of shrubs are grown, and broad-leaved evergreens are a specialty. Most of the stock is sold at retail through the landscape plantings which the company supervises.

By mulching with peat moss, flax

fiber, manure and sawdust, stock can be planted closely. With this system there are few weeds, and no cultivation is necessary for one or two years after planting. Root-pruning is done every two years, when stock is relined. The entire nursery has an overhead sprinkling system.

From 1936 to 1940 Mr. Doerfler set up and managed a 600-acre peppermint farm, on part time, in the Longview part of Washington, which is the largest in the northwest.

In addition to his agricultural activities Mr. Doerfler has given half of his time to civic and patriotic work. He is chairman of the rural division in the Salem district for war bond sales, the war chest and the Red Cross. He is director of the war chest for Marion county, director of the Willamette Valley Reclamation Association for Marion county, a past director of the Kiwanis Club and a director of the Salem chamber of commerce. During his term as chairman of the chamber of commerce membership was increased from 400 to 1,000. For the past three years Mr. Doerfler has attended the National Reclamation Conference at Denver, Colo., for the chamber of commerce. In 1941 he was King Bing of the Cherrians, a good-will organization for Salem.

NEW SECRETARY OF PARK EXECUTIVES INSTITUTE.

David Hovey, of Minot, N. D., has been appointed to fill the office of executive secretary of the American Institute of Park Executives. This action was taken upon the resignation of W. O. Doolittle, effective January 1.

Mr. Doolittle held a long tenure of office. He was secretary-treasurer of the institute from 1922 to 1925 and then continued as executive secretary until 1928. In 1936 he was called back to the position, which he has held since that time. He expects now to give full time to the managing and editing of Parks and Recreation, the organization magazine.

The new secretary, David Hovey, is well acquainted with institute policies, having served as assistant in the secretary's office from 1923 to 1927 and during part of that time having acted as advertising manager for Parks and Recreation. He is a graduate of Minot high school and graduated in 1931 from Dartmouth College, where he was active in publicity work.

The offices of the institute will remain at Rockford, Ill. Mr. Hovey expects to move there in January.

THE WILLIS NURSERY CO.

Ottawa, Kansas

Most of this stock, with the exception of the shade trees, is in storage ready for shipment at any time. All stock is offered subject to prior sale, and all prices are subject to change without notice.

TERMS: Cash, except to firms or individuals with established credit. Orders to be shipped C.O.D. must be accompanied by one-fourth cash. Packing will be charged at cost except on bulk truck or carlot shipments. No order filled for less than full bundles. 30 or more supplied at the 100 rate; 300 or more at the 1000 rate.

SHRUBS

ALTHAEA (Rose of Sharon).	Per 10	Per 100
Pink or Red.		
2 to 3 feet.	\$2.90	\$25.00
18 to 24 inches.	2.10	18.00
BARBERRY MENTORENSIS.		
18 to 24 inches.	4.00	35.00
CALLICARPA PURPUREA.		
3 to 4 feet.	4.00	35.00
CORALBERRY CHENAUTI.		
2 to 3 feet.	2.40	20.00
CORNUS SANGUINEA.		
3 to 4 feet.	4.00	35.00
CORNUS STOLONIFERA.		
3 to 4 feet.	4.00	35.00
CRAPE MYRTLE. Pink or Red.		
18 to 24 inches.	2.40	20.00
12 to 18 inches.	1.90	15.00
CYDONIA JAPONICA.		
3 to 3 1/2 feet.	4.00	35.00
2 to 3 feet.	2.90	25.00
18 to 24 inches.	2.40	20.00
12 to 18 inches.	1.90	15.00
DEUTZIA, PRIDE OF ROCHESTER.		
3 to 4 feet.	4.00	35.00
LILAC, ROTHOMAGENSIS.		
2 to 3 feet.	4.00	35.00
PHILADELPHUS CORONARIUS.		
2 to 3 feet.	2.90	25.00
SALIX PURPUREA NANA.		
2 to 3 feet.	3.50	30.00
18 to 24 inches.	2.90	25.00
SNOWBERRY, MOLLIS.		
2 to 3 feet.	2.40	20.00
18 to 24 inches.	1.90	15.00
SPIRAEA, ANTHONY WATERER.		
18 to 24 inches.	4.00	35.00
SPIRAEA ARGUTA.		
3 to 4 feet.	4.00	35.00
2 to 3 feet.	2.90	25.00
SPIRAEA BILLIARDI.		
3 to 4 feet.	4.00	35.00
2 to 3 feet.	2.90	25.00
SPIRAEA FROEBELI.		
2 to 2 1/2 feet.	3.50	30.00
18 to 24 inches.	2.50	22.00
SPIRAEA PRUNIFOLIA.		
3 to 4 feet.	4.50	40.00
SUMAC AROMATICA.		
3 to 4 feet.	4.00	35.00
2 to 3 feet.	3.50	30.00
VIBURNUM DENTATUM.		
3 to 4 feet.	4.00	35.00
VITEX MACROPHYLLA.		
12 to 18 inches.	2.90	25.00
	2.10	18.00

PRIVET

AMUR NORTH.	Per 100	Per 1000
2 to 3 feet, 5 canes and up.	\$17.50	\$150.00
18 to 24 inches, 4 canes and up.	12.00	100.00
CALIFORNIA.		
2 to 3 feet, 4 canes and up.	12.00	100.00
18 to 24 inches, 3 canes and up.	9.00	75.00
12 to 18 inches, 3 canes and up.	7.00	60.00

SHADE TREES

ASH, GREEN.	Per 10	Per 100
2 to 2 1/2-in. cal.	\$22.00	\$200.00
1 1/2 to 2-in. cal.	16.50	150.00
1 1/4 to 1 1/2-in. cal.	12.50	110.00
8 to 10 feet.	10.00	85.00
BIRCH, RIVER OR BLACK.		
6 to 8 feet.	10.00	...
ELM, AMERICAN.		
2 1/2 to 3-in. cal.	40.00	350.00
2 to 2 1/2-in. cal.	27.50	250.00
1 1/2 to 2-in. cal.	22.00	200.00
1 1/4 to 1 1/2-in. cal.	17.50	160.00
1 1/2 to 1 1/4-in. cal.	13.00	110.00

CHINESE ELM

2-year seedlings.

These trees are all branched, well calipered and straight; just right for small shade trees.

	Per 10	Per 100
5 to 6 feet.	\$3.75	\$33.00
4 to 5 feet.	2.50	22.00

HACKBERRY.	Per 10	Per 100
2 to 2 1/2-in. cal.	\$27.50	\$250.00
1 1/2 to 2-in. cal.	19.00	175.00
1 1/4 to 1 1/2-in. cal.	15.00	135.00
8 to 10 feet.	11.00	100.00
5 to 6 feet.	6.50	60.00
4 to 5 feet.	5.00	45.00
HONEY LOCUST.		
8 to 10 feet.	13.50	125.00
6 to 8 feet.	10.00	90.00
4 to 5 feet.	5.50	50.00
HONEY LOCUST, THORNLESS.		
5 to 6 feet.	8.00	70.00
4 to 5 feet.	6.00	55.00
HOP TREE.		
6 to 8 feet.	10.00	85.00
5 to 6 feet.	7.00	60.00
KENTUCKY COFFEE TREE.		
8 to 10 feet.	15.00	125.00
6 to 8 feet.	10.00	85.00
MAPLE, AMUR.		
6 to 8 feet.	14.00	125.00
5 to 6 feet.	10.00	90.00
4 to 5 feet.	7.00	60.00
MAPLE, SOFT OR SILVER.		
1 1/2 to 2-in. cal.	16.50	150.00
1 1/4 to 1 1/2-in. cal.	12.50	115.00
8 to 10 feet.	11.00	100.00
OAK, PIN.		
3 to 3 1/2-in. cal.	55.00	500.00
2 1/2 to 3-in. cal.	45.00	425.00
1 1/2 to 2-in. cal.	27.50	250.00
8 to 10 feet.	19.00	175.00
6 to 8 feet.	14.00	125.00
OAK, RED (A. Rubra).		
6 to 8 feet.	15.00	...
5 to 6 feet.	12.50	...
POPLAR, LOMBARDY.		
1 1/2 to 2-in. cal.	10.00	90.00
1 1/4 to 1 1/2-in. cal.	7.00	65.00
8 to 10 feet.	5.50	50.00
6 to 8 feet.	4.00	35.00
RED BUD.		
6 to 8 feet.	11.00	100.00
SYCAMORE, AMERICAN.		
1 1/2 to 2-in. cal.	19.00	175.00
1 1/4 to 1 1/2-in. cal.	14.00	125.00
8 to 10 feet.	11.00	100.00
THORN, COCCINEA.		
5 to 6 feet.	12.50	...
4 to 5 feet.	10.00	...
THORN, CRUGALLI.		
6 to 8 feet.	17.50	...
5 to 6 feet.	12.50	...

VINES

AMPELOPSIS ENGELMANNI.	Per 10	Per 100
No. 1	\$2.15	\$19.00
Medium	1.70	14.00
AMPELOPSIS, BOSTON IVY.		
No. 1	4.50	40.00
Medium	4.00	35.00
CLEMATIS PANICULATA.		
No. 1	3.50	32.00
Medium	2.90	25.00
HONEYSUCKLE, HALL'S.		
No. 1	1.90	16.00
Medium	1.45	12.00
WISTERIA, CHINESE PURPLE.		
No. 1	2.90	25.00
Medium	2.10	18.00

SHADE TREE SEEDLINGS

ELM, CHINESE.	Per 100	Per 1000
4 to 5 feet.	\$7.50	\$60.00
3 to 4 feet.	5.00	40.00
2 to 3 feet.	3.00	25.00
18 to 24 inches.	2.00	18.00
LOCUST, BLACK.		
12 to 18 inches.	1.75	15.00
6 to 12 inches.	1.20	10.00

GRAPES

CATAWBA, Purplish-red.	Per 10	Per 100
2-year, No. 1.	\$2.40	\$20.00
1-year, No. 1.	1.80	15.00
CONCORD, Black.		
2-year, No. 1.	1.80	15.00
1-year, No. 1.	1.30	11.00
FREDONIA, Black.		
2-year, No. 1.	2.40	20.00
1-year, No. 1.	1.80	15.00
NIAGARA, Yellowish-green.		
2-year, No. 1.	2.10	18.00
1-year, No. 1.	1.70	14.00

CURRANTS

CHERRY.	Per 10	Per 100
2-year, No. 1.	\$2.40	\$20.00
1-year, No. 1.	1.80	15.00
FAYS PROLIFIC.		
2-year, No. 1.	2.40	20.00
1-year, No. 1.	1.80	15.00
RED LAKE.		
2-year, No. 1.	2.90	25.00
1-year, No. 1.	2.40	20.00
WILDER.		
2-year, No. 1.	2.40	20.00
1-year, No. 1.	1.80	15.00

RASPBERRIES

CHIEF, Red.	Per 100	Per 1000
No. 1 suckers.	\$8.50	\$75.00
CUMBERLAND, Black.		
No. 1 tips.	6.00	50.00
LATHAM, Red.		
No. 1 suckers.	8.50	75.00
SUNRISE, Red.		
No. 1 suckers.	8.50	75.00
WASHINGTON, Red.		
No. 1 suckers.	7.00	60.00

MISCELLANEOUS BERRIES

BLACKBERRIES.	Per 100	Per 1000
Early Harvest, No. 1, R.C.	\$5.50	\$45.00
BOYSENBERRIES.		
No. 1 tips.	7.50	65.00
YOUNGBERRIES.		
No. 1 tips.	6.00	50.00

GARDEN ROOTS

ASPARAGUS, PARADISE.	Per 100	Per 1000
3-year roots	\$3.50	\$30.00
2-year roots	2.50	20.00
1-year roots	1.90	16.00
ASPARAGUS, WASHINGTON.		
3-year roots	3.00	25.00
2-year roots	2.00	18.00
1-year roots	1.40	12.00
RHUBARB, VICTORIA.		
1 to 1 1/2 inches.	6.00	50.00
5/8 to 1 inch.	4.50	40.00
1/2 to 5/8 inch.	3.50	30.00
HORSE-RADISH.		
Root cuttings	4.00	35.00
Crowns	7.50	65.00

ROSES

We may have some surplus. Send your list of wants for quotations.

Discuss Soils and Fruits at Pittsburgh

By A. O. Rasmussen

The meeting of the Western Pennsylvania Nurserymen's Association held December 4 at the Webster Hall hotel, Pittsburgh, was one of the best attended of the organization, with sixty-five nurserymen present. The meeting was opened by President Walter P. Morrow, which began with the transaction of business and the nomination of directors for the ensuing year. Then Stanley Leonard, chairman of the program committee, introduced the speakers.

Frank Bamer, of the agronomy extension service of Pennsylvania State College, presented an excellent talk on "Maintaining Fertility in a Nursery." Mr. Bamer illustrated his talk with beautiful Kodachrome slides.

Several slides illustrated soil erosion as it occurs in the nursery. "Finger washes," Professor Bamer stated, occur primarily after a heavy rainfall. Two types of washes are most troublesome, mainly rill or gutter washing and sheet washing; the latter, however, causes less trouble. The problem of the farmer is similar to that of the nurseryman.

Rainfall of one inch covering one acre of ground is an equivalent to 100 tons of water. Some washing is absorbed by the soil, while the remainder is classified as runoff.

Professor Bamer stated that contour strip farming, sometimes called "flag stripping" because the strips resemble the stripes of the American flag, has been going on in Lycoming county since the Civil war, with generation after generation since that time following a definite practice of soil-erosion prevention. Another county, Montour, has been practicing a similar type of soil-erosion prevention since 1896.

Professor Bamer defined the contour line as a level line which must be practical as well as workable. Using a slide illustrating corn planting, he continued that the strips were twenty-four rows wide. With additional illustrations he showed how close-growing crops between crops would slow up water runoff. He encouraged the nurserymen to do something about stoppage of the runoff of water in their nurseries. Slides showing work which had been done at the Andorra Nursery, Conshohocken, Pa., clearly illustrated how the contour strips work. He stated that the farmer never revamps all of his farm at one time and that the nurseryman should be following a

similar practice of contour stripping.

The ordinary buffer strips of ten to fifteen feet which are located between nursery crops can be used as a driveway. This sod buffer strip should be of a close-growing sod which will check runoff of water.

Professor Bamer suggested that the nurseryman should use rye grass, which should be sown between August 15 and September 15. Assuming that good weather conditions prevail, it will make a fine fibrous root growth. The average rate of application is twenty pounds of domestic rye grass per acre. Organic matter gives a finishing touch to the soil. The crop rotation used by the farmer can be followed in ordinary nursery practice. The rotation of corn, oats, wheat and hay is what the average farmer uses. Another suggested rotation was alfalfa and orchard grass. If you have a piece of ground to be rested, keep it with a pH of 6.8. Professor Bamer suggested that the nurseryman have the soil tested at the county agent's office.

In order to improve the soil, a crop of soybeans and Sudan grass should be planted about May 10. After the mixture has matured it should be mowed and then plowed under. In the fall legumes should be planted. Incidentally, the soybeans and Sudan grass have a loosening effect. When the legumes are planted in the fall, Professor Bamer suggested that ten pounds of alfalfa, five pounds of orchard grass and one pound of Ladino clover be planted to each acre.

A pasture field was defined as a field giving money return, while the average field with which a nurseryman works is a field giving a beauty or aesthetic return. Professor Bamer illustrated on the blackboard how it is possible to create the contour strip effect. He stated that when a sod is established as a buffer strip it can be used as a driveway between the nursery crops in order to prevent deep grooves from occurring on this strip. He suggested that the trucks and other equipment which are used should "straddle-track" through this area. It was suggested that the sod strips be treated with ground limestone and superphosphate every three or four years. In this way a good buffer strip as well as a good roadway results.

Prof. J. U. Ruef, extension po-

mologist, spoke on "Fruit Varieties," stating that nurserymen will have to meet the demand for more fruit trees. He believes that small orders mean big business, as many small shipments will come from the homeowners rather than the commercial fruit growers. He does not believe that the average homeowner will not give the proper attention to the trees when they are planted. Success with fruit growing comes from good care and management plus a selection of good varieties.

He suggested that dwarf fruit trees were the most promising types of trees for use for the town lot. These trees should be kept pruned to a height of eight to ten feet. Nurserymen and homeowners can always obtain information on spraying and dusting through their county agents.

He suggested Lodi, McIntosh, Summer Rambo, Red and Golden Delicious and Rome Beauty as being the outstanding apple varieties to plant. Northern Spy requires twelve to fifteen years to come into bearing; therefore, it should not be considered as a good variety. The nurseryman should sell two or three trees of different varieties rather than one variety. He suggested the combination of Lodi, McIntosh and Red Delicious as a good combination, since these varieties will adequately care for cross-pollination. He stated that two or three varieties might be grafted onto one tree and provide early, middle-season and late-fruited types.

Among the cherries Professor Ruef suggested Montmorency as a type most suitable for the homeowner, provided the birds did not get the fruit first.

Among peaches, Golden Jubilee, a winter hardy variety; Hale Haven, and Rochester are the outstanding types. The last-named is the hardiest of the three. Elberta, Cumberland and White Hill are additional varieties worthy of consideration.

Among small fruits, strawberries were the first crop discussed. Howard 17 is considered the heaviest producer in America. Among the everbearing varieties, Perfection is outstanding. The everbearing type is not suggested, however, for home use.

Among raspberries, Latham and Taylor are good, Taylor producing the bigger berry, but not being quite so winter hardy.

Professor Ruef stated that the



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BERRY PLANTS

Newburgh Red Raspberry
Taylor Red Raspberry
Sodus Purple Raspberry
Morrison Black Raspberry

Bristol Black Raspberry

Boysenberry, heavy tips:
Thornless and Regular

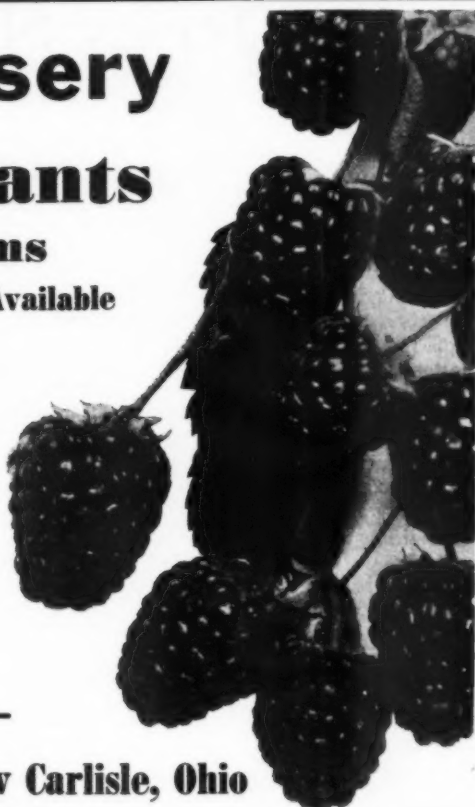
Youngberry tips and
2-yr. transplants.

GARDEN ROOTS

English Broad-leaved Sage
Maligner Kren Horse-radish
Whole Roots and Cuttings

ORNAMENTAL VINES

Silver Lace, 2-yr., No. 1 and Med.
Euonymus Carrierei, 12 to 18 ins.
Euonymus Coloratus, 2-yr.



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nurseryman should determine the customer's preference before attempting to sell raspberries. If the customer wishes both red and black raspberries it would be advisable to discourage the planting of both types, since there is a possibility of getting disease rather quickly. If the customer will use one color alone, he will have much better results. Cumberland and Morrison were suggested as being outstanding black varieties. The Eldorado blackberry is considered the best for the average homeowner.

The outstanding blueberries are Cabot, Adams, Pemberton and Wellington, Professor Ruef said.

Among the grapes, Van Buren, an early blue which ripens about August 10; Fredonia, also a blue, and Portland, a white variety, both of which ripen August 20, are to be preferred over the old-fashioned Concord and Niagara.

Professor Ruef concluded with the remark that the nurseryman has an opportunity to care for the small homeowners and that small fruit orders often result in large orders being placed for ornamental stock.

Melvin E. Wyant, Mentor, O., a former president of the Ohio Nurs-

[Continued on page 41.]

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Western Association of Nurserymen, Kansas City, Mo.
Iowa Nurserymen's Association, Des Moines.
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EUONYMUS ALATUS COMPACTUS

18 to 24 ins., \$40.00 per 100; 2 to 3 ft., \$60.00 per 100.

EUONYMUS ALATUS

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New Jersey Shade Tree Meeting

By P. P. Pirone

The twentieth annual meeting of the New Jersey Federation of Shade Tree Commissions, December 5, at Newark, N. J., broke all records for attendance and quality of the program. Although the majority of those in attendance were from New Jersey, arborists and municipal shade tree officials from six other states also attended.

The officers for 1946 elected at the business meeting were: President, William McIntyre, Morristown; vice-president, Richard Walters, Maplewood; secretary-treasurer, Philip Alden, Kearney.

Highlighting a group of outstanding speakers was Dr. August P. Beilmann, of the Missouri Botanical Garden, who spoke on "Shade Tree Fertilization." Many in the audience agreed that his talk was the best they had ever heard on this subject.

Dr. Beilmann spoke with sixteen years of background in tree fertilization. He pointed out that early in the work he found that well fertilized trees continued to make good growth even during periods of drought and that some of the so-called slower-growing trees could be made to grow as rapidly as elms and planes by proper fertilization of the soil.

The work at the Missouri Botanical Garden was done with mature trees established in permanent plantings and not with small trees or potted ones, he continued.

Nitrogen was found to be the limiting factor in good tree growth, he said, but the use of nitrogen alone did not give so good results as a complete fertilizer containing phosphorus and potash in addition to the nitrogen.

At the end of the first five years of the experiments, Dr. Beilmann said he was using five times as much fertilizer and two and one-half times as much nitrogen as at the start. The growth in trunk diameter and twig length was in direct proportion to the amount of 10-8-6 fertilizer used. His work produced no evidence that there is an advantage in the use of a fertilizer containing organic sources of nitrogen. To calculate the amount of fertilizer an undernourished, old tree needs, Dr. Beilmann used the following method: Add the height of the tree in feet with the diameter of the branch spread in feet plus the circumference of the trunk in inches.

This total gives the number of pounds of 10-8-6 to use.

Dr. Beilmann pointed out that the proper distribution of the fertilizer in the soil was of even greater importance than the grade of fertilizer.

At the present time, the punch bar method is the simplest, because of the availability of tools. The disadvantage of the method is that it compacts the soil so that the fertilizer is confined to a small area. A better method, he said, was to force compressed air into the holes after the fertilizer has been placed in them. This makes for far better distribution, and the fertilizer is more readily available to a greater percentage of roots.

A panel discussion on spray materials and practices opened the educational program. The retiring president, Carl Witte, horticulturist for the Essex county park system, acted as moderator. Dr. C. C. Hamilton, entomologist at the New Jersey sta-

tion, discussed the scientific aspects of the problem, and Herman Porter, of the Bartlett Tree Expert Co., described some of the practical phases involved in the use of spray materials on trees.

Dr. O. N. Liming, of the United States Department of Agriculture, presented a highly interesting talk on "Standardization of Shade Tree Practices" based on a recent survey he conducted at the request of the National Shade Tree Conference.

One thing shade tree men lacked, he said, was an adequate educational program. Dentists, for example, have educated the public "to see your dentist twice a year." Dr. Liming feels that a program along such lines for arboriculture would tend to enhance the value of the profession in the public's eye.

He stressed, however, that four important steps must be taken before making a concerted effort to start such a program:

(1) Facts proving that shade trees increase the value of private properties and communities should be secured.

(2) Owners should be convinced that their trees require care.

(3) Good research work on the requirements of trees and disease and insect control should be stimulated.

(4) Improve the conduct and practices of the arborists so that they are worthy of their hire.

The first three can be carried out cooperatively by the scientists and arborists, while the fourth step must be built on the honesty and ability of the arborists themselves.

In the absence of Dr. F. C. Craighead, chief of the division of forest insect control, U.S.D.A., Dr. C. H. Hadley, of the Japanese beetle laboratory, Moorestown, gave an up-to-the-minute talk on the possible uses of DDT in the control of tree insects.

Dr. W. H. Martin, dean and director of the New Jersey college of agriculture and experiment station, gave his usual splendid talk at the luncheon. He described the future research and teaching plans at his institutions and told of his request to the legislature for a new building to house the various agricultural science departments.

Following luncheon, Dr. P. P. Pirone, plant pathologist, described methods of detecting illuminating

AN ARBORATOR'S LAMENT.

With apologies to the late Mr. Sam Baxter and to the late Mr. Joyce Kilmer.

I too love a tree,
Or would I, as you see,
Get that darned black paint
All over me.
With ants in my pants
That make me dance,
I still love that tree.

Poems may not be versed
By fools like me
But poems would be mild
If you climbed a shell-barked tree.
In my shirt I get a tear,
I get Arsenate in my hair,
Oil emulsion in my eye,
Tobacco spray that makes me cry,
But I still love that tree.

Will there ever come the day
When I can really say,
That I planned my life this way?
Dig for borers that were not there,
Grub for grubs that did not care,
Work in heat that makes you swear
Or in cold in red underwear,
But I still love that tree.

Splice a cable that would not work,
Feed a tree and hit a pipe,
Dig a cavity that was over ripe,
Crank a sprayer that would not spurt,
Have a gang that loved to work,
I still love that tree.

Tree-man, Arborist, Arborator,
Skinner, Feeder, Soil-Airator,
Call me what you might,
Will I ever see the light?
Things are greener over there
But I still love black paint in hair,
Yes, I still love that tree.

Archibald Enoch Price.

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gas injury to street trees. He suggested ways of gathering evidence which would stand up in court should any litigation arise.

Orville Spicer, president of the Bartlett Tree Expert Co., presented a well received talk on the value of shade trees to a community. He also announced that his company has made sufficient money available to the New Jersey agricultural experimental station for a 2-year study on chemical injection of trees for disease and insect control. The work will be conducted under the supervision of Dr. P. P. Pirone, he said.

The place and value of the new 2-4-D weed killers were described by Dr. G. H. Ahlgren, of the experiment station. Dr. Ahlgren has had ample opportunity to test these materials as lawn herbicides during the past year. Buckthorn, plaitain and dandelion are readily destroyed by spraying with 2-4-D at the rate of one-twentieth of a pound in five gallons of water per thousand square feet of lawn area. Other weeds are more resistant, but may be destroyed either by using more concentrated solutions or by making more applications.

Ammonium sulphamate, he said, still is one of the best destroyers of

[Continued on page 38.]

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VICTORIA RHUBARB (Whole Roots)		Per 100	Per 1000
3/8 to 1/2-in. cal.		\$ 2.75	\$25.00
1/2 to 3/4-in. cal.		3.75	35.00
3/4 to 1-in. cal.		4.50	40.00
1 to 1 1/4-in. cal.		6.50	50.00
1 1/4-in. cal. and up, clumps.		10.00

HORSE-RADISH			
Maliner Kren, 4-in. cuttings.		1.25	10.00
Maliner Kren, whole roots.		4.50	40.00

BLACKBERRIES, 1-year-old Root Cutting Plants		No. 1		No. 2	
		Per 100	Per 1000	Per 100	Per 1000
Eldorado		\$4.00	\$35.00	\$3.00	\$25.00
Alfred		4.00	35.00	3.00	25.00

RED RASPBERRIES		1-yr., No. 1	1-yr., No. 2
St. Regis		5.50	50.00
		4.00	35.00

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Plant Notes Here and There

By C. W. Wood

Small snapdragons, excepting *Antirrhinum asarina*, which one sometimes sees in American plant or seed lists, are so seldom available that I hesitated before writing this note, but finally decided to use a little space with the hope that our growers will search out sources of supply now that Europe is open to commerce again. Their long blooming season—a desirable feature in any plant—was the deciding factor, but their ease of culture, where hardy, had no small weight in the matter. Notwithstanding all their good points, they have certain drawbacks, such as tenderness to cold in the north. None is reliably hardy here in northern Michigan, though the one I shall mention later and *A. asarina* are fairly so, and we can carry them through with a little care.

From the high Pyrenees comes *A. sempervirens*, one of the better kinds, rather prostrate in growth, whose branches are clothed in pretty soft gray leaves and produce from early till late a procession of snapdragons white or creamy-white with pink veins on the upper lip. It is a splendid plant for the wall or rock garden in light soil in sun. It comes readily from seeds or cuttings.

Iris Notes.

Rot in rhizomes of iris is a serious challenge to iris growers at times. I have not followed the literature on the subject to see the latest conclusions, but I am convinced from experience here that lack of phosphorus in the soil is a contributing cause. At any rate, the use of superphosphate, well incorporated with the soil before planting and as a top-dressing if the plantation remains for several years, at least inhibits the advent of the malady. Several years ago I noticed the recommendation to use potassium permanganate, not only for its potash and manganese contents, but also for its ability to break down organic matter. It was claimed, I think, that potassium permanganate is useful in the control of iris rot. It would be worth trying for its sterilizing property alone.

Aquilegia Discolor.

Small columbines have, often with good reason, the reputation of being short-lived. Gardeners often give that as the reason for leaving them out of their schedules. But the large ones, especially the long-spurred hy-

brids, are also short-lived, and a columbine lover does not object to that. Not all the small ones are short-lived, however, and not many are hard to handle. For instance, I have had plants of *Aquilegia flabellata nana alba* in my garden for all of twenty years which are just as vigorous as they were when first planted. The little *A. discolor* from the mountains of northern Spain is almost as amiable and quite as hardy as the Japanese.

The Spanish plant makes a conservative tuft of gray-green leaves, lovely in itself, but its crowning glory comes when it sends up 8-inch stems, bearing at the top a lovely blue and white flower. The books do not tell the whole story, because they do not say that the white petals often have a flush of red on the back, especially at the tip and along the center. This added color not only gives the specific name meaning, but it gives an extra charm to the flower. It was both easy and permanent here in light shade in the ordinary sandy soil of this garden. As plants are available in this country, it should not be much trouble to give it a trial.

The Gladwyn Iris.

A bouquet of seed pods of the Gladwyn iris, *Iris foetidissima*, on the desk as this note is written reminds me that many growers are missing two chances for extra profit when they neglect this plant. The first chance is in plant sales. Although long known in gardens, it is safe to say that not one present-day gardener out of ten knows the plant, except by reputation, and probably not many know it even that way. It is not much as a garden plant, its small gray-purple flowers being inconspicuous if not actually ugly, but it shines after the large seed pods open in autumn and display the bright scarlet fruits. These pods, if wired, will remain presentable throughout the winter. And that offers another opportunity for sales to florists and users of material for dried bouquets. It is one of the rhizomatous irises of the same easy culture as most of that kind. But if experience here is basis for judgment, there is a vast difference in the hardiness of different plants or, perhaps I should say, of different strains. That is not to be wondered at, either, because its natural distribution covers western and

southern Europe as well as northern Africa.

Liriope Spicata.

I spent a recent week-end in a southern Michigan home in the garden of which the lily turf, *Liriope spicata*, is made much of. It prompted me to come home and look up my notes on the plant. Among them I find references to two species, *L. muscari* and *L. spicata* (the latter usually known as *L. graminifolia* or *Ophiopogon jaburan*), both of which proved to be too tender for this severe climate. If I could grow it as my friend does, I know two or three shady spots where it could solve my present problems.

A Chinese plant, *L. spicata* needs a sheltered spot that far south, and even then its evergreen foliage suffers badly. If one went farther south the plant could be enjoyed and used as Miss Jekyll relates in "Wood and Garden." There she tells that she grew it "in rather large quantity for winter cutting, the leaves being at their best in the winter months. They are sword-shaped and of a lovely green color and are arranged in flat sheaves after the manner of a flag iris. I pull up a whole plant at a time—a 2-year-old plant is a spreading tuft of the little sheaves—and wash it out and cut away the groups of leaves just at the root, so that they are held together by the rootstock. They last long in water and are beautiful with Roman hyacinths or freesias or *Iris unguicularis* (stylosa) and many other flowers."

That tells of one use for the useful lily turf. Another is its spreading green carpet for sun or shade. Still another is its queer little spikes of purple flowers, quite like a grape hyacinth. Where hardy, it should make a good addition to the neighborhood nurseryman's list.

Notholirion.

I found out last summer by accident one of the things wrong with my treatment of the Asiatic lily cousins, the notholirions. The main bulb dies after flowering, and in the case of *N. macrophyllum* at least, only tiny little bulblets are left to carry on. These should, I suspect, be dug and nursed along to flowering size, but I shall not try them longer, because they are too tender for this climate. In fact I cannot grow *N. thomsonianum* at all, because it in-

STRAWBERRIES • GRAPES • ASPARAGUS • CANNAS

BEST QUALITY STOCK — ORDER NOW FOR SHIPMENT AS WANTED — SPRING '46

STRAWBERRY PLANTS

Weather conditions in our locality have been favorable this season for the production of nice, stocky Strawberry plants. If you are interested in large numbers of plants, or in our pack-out service (whereby shipments are made direct to your customers, under your tags), write for details. We are facilitated to take care of your Strawberry plant business. Let us figure with you on your particular requirements.

STANDARD VARIETIES:	Per 25	Per 100	Per 250	Per 1000
Blakemore, Dunlap, Missionary.....	\$0.40	\$1.25	\$2.25	\$8.00
Blondyke, Majestic, Massey, Maytime, Swannee.....	.45	1.40	2.50	9.00
Ambrosia Late, Big Joe, Catskill, Chesapeake, Dorsett, Fairfax, Fair- peake, Gandy, Lupton Late, Midland, Parsons Beauty, Premier, Redstar, Robinson, Starbright, Southland, Temple.....	.50	1.50	2.75	10.00
EVERGREEN VARIETIES:				
Gem, Lucky Strike, Mastodon, Ever- more (Minn. 1166).....	.75	2.50	5.00	18.00
tiemzata.....	1.00	3.25	7.00	25.00

No extra charge is made for the package or packing on strawberry plant orders.

Prices quoted are for delivery October 15, 1945, to June 1, 1946, and apply as follows:

- 25 to 75 plants of one variety at the 25 rate.
- 100 to 225 plants of one variety at the 100 rate.
- 250 to 475 plants of one variety at the 250 rate.
- 500 plants or more of one variety at the 1000 rate.

ASPARGUS ROOTS

Our Asparagus roots have made a particularly good growth this season. We are the largest growers of Asparagus roots in the country. Write for special prices on large numbers.

	Per 25	Per 100	Per 250	Per 1000
Mary Washington.....	.25	1.00	2.50	10.00
3-year, No. 1 grade.....	\$1.25	\$4.00	\$8.75	\$30.00
2-year, No. 1 grade.....	.75	2.50	5.25	18.00
1-year, No. 1 grade.....	.60	2.00	4.00	12.00

BUNTINGS' NURSERIES, INC.

Box 3
SELBYVILLE, DELAWARE

GRAPEVINES

Grapevines are another specialty with us. Our Grapes have heavy fibrous root systems, with many lengthy canes at the top. Write us for prices on large numbers.

	Each	Per 10	Per 100
Concord (Blue), 2-yr., No. 1.....	\$0.25	\$1.75	\$14.00
Concord (Blue), 1-yr., No. 1.....	.20	1.50	10.00
Catawba (Mahogany), Fredonia (Black), Moore's Diamond (White), Moore's Early (Black), Niagara (White), Port- land (White), Worden (Black), 2-yr., No. 1.....	.30	2.25	17.00
1-yr., No. 1.....	.25	1.75	12.00
Agawam (Red), Brighton (Red), Caco (Red), Delaware (Red), 2-yr., No. 1.....	.35	2.50	20.00
1-yr., No. 1.....	.30	2.25	15.00

CANNAS

Carefully grown under our personal supervision, they are true to name, liberally graded. 2 to 5-eye strong divisions, and will please the most exacting type of customer. Write for prices on large numbers, giving a list of your anticipated requirements. Our trade list carries descriptions on the various varieties.

	Per 100	Per 1000
Allemania, Ambassador, California, Charles Henderson, Egandale, Firebird, Florence Vaughan, Golden Gate, Pingaria, Indiana, Kate Grey, Louisiana, Madama Crozy, Pennsyl- vania, Richard Wallace, Shenandoah, Uncle Sam, Wintzer's Colossal, Yellow King Humbert, Wyoming.....	\$7.00	\$55.00
Copper Giant, Red King Humbert, King Midas, Louise Cayeux, President.....	\$8.00	\$60.00

All quotations are F.O.B. Selbyville, subject to stock being sold upon receipt of order. Free packing for cash with order on Asparagus, Grapes and Cannas.

Our Fall 1945 Wholesale List is now ready for distribution, offering a complete line of stock, including fruit trees, small fruit plants, garden roots, evergreens, shrubs, shade trees, bulbs, etc. Write for a copy if you are not on our mailing list. Please use your printed stationery when requesting wholesale prices.

sists on commencing its top growth in autumn.

Allium Crenulatum.

Some may think that an onion is an onion no matter what the flower color and leafage may be, but there are onions and onions. Thus some of the most attractive blue flowers of summer are found in Asiatic members of the genus. And then we have our own pretty little westerner, Allium crenulatum, with its deep rose-pink flowers on stems seldom over three inches in height. It would not be a plant for the general mail-order dealer, but the reaction of visitors here tells me it would sell locally, especially if one had customers interested in rock gardening. And one could put it in the average gardener's hands knowing that it would behave well in light soil and sunshine.

Thriffs.

The thriffs (armeria) need no introduction to American Nurseryman readers, because they are surely known in some form to all. But it is not apparent that they are used as lavishly as they could be in some cases. For instance, many a garden has dry difficult spots whose owners

[Continued on page 39.]

NORWAY RED PINE

300,000 5-yr. transplants.

Average, 24 ins.; minimum, 18 ins.
High-grade stock.

Offer at 50 per cent less than market price for large orders placed early for spring shipment.

Write or wire

SUNCREST EVERGREEN NURSERIES
Johnstown, Pa.

Evergreens Barberry

Privet

Write for wholesale price list.

GARDNER'S NURSERIES

Rocky Hill, Conn.

HARDY NATIVE EVERGREENS TREES and SHRUBS

Collected stock.
Lining-out sizes and seedlings.

R. M. COLE

Box 37 Charlotte, Vt.



Who offers the nursery trade of this country the greatest line of rare trees and shrubs?

What is the only wholesale nursery list that shows the hardiness of each item?

Write for list 4546 and find out! But use your business stationery, as postcards will be ignored.

W. B. CLARKE & CO.

P. O. Box 343
San Jose 2, Calif.

FOR BEST RESULTS
use the penetrating fumigant



What Does Your Industry Need?

By R. A. Trovatten

After some fourteen years as commissioner of agriculture of Minnesota, close association with the nurserymen of Minnesota and on occasion having been called to counsel and work with your industry nationally, on important matters at Washington and elsewhere, I feel that I am in a position to discuss with you some of the needs of your business in a general way.

I have been through a number of battles, as we might well call them, side by side with the nursery industry, at Washington, D. C. A few years ago I was honored with the position as president of the National Association of Commissioners, Secretaries and Directors of Agriculture. At that time we found it necessary, in order to keep your business from being hampered, if not almost destroyed, to be sure that your activities were defined as agriculture. I recall a very serious United States Labor Relations Board opinion which had to be settled, and I believe it was settled properly. I could mention many items which affected your businesses during the war, and had it not been for the spearheading of your American Association of Nurserymen, I am sure that many of you would have gone out of business.

First, I should like to outline a few things directly in connection with your business, which I think should be taken care of, and then proceed with a general discussion of the effects of some government activities on your industry.

At the outset, I wish to stress the importance of research in connection with your industry. It is not always usual for a man in charge of general regulatory and control aspects of agriculture first to stress research. I stress research in various fields because I know that we could do little in regulatory and control efforts without research to provide the answers to some of our problems. Before proceeding with more specific items, I should like to state that I am in agreement with the consensus of many that, insofar as research is concerned, we are only scratching the surface. I am firmly of the belief that wherever appropriations are made for horticultural or agricultural projects in

general, certain definite percentages of the allotted funds should be set aside for research in fair proportion to each item under consideration.

I know of cases where several millions of dollars have been spent on a single pest control project and only about \$10,000 spent on research for the same problem in the same period. It was later found that, because of just one discovery resulting from the little research permitted on the problem, about a half-million dollars were saved in the control funds as a whole. I can stress numerous instances of that kind with respect to research in relation to general appropriations for this and that.

Having weed and seed inspections as one of the divisions under our new bureau of plant industry of the state department of agriculture in Minnesota, we naturally have become concerned with respect to weeds. Few persons are aware of the fact that four or five billion dollars' worth of damage is caused by weeds each year in the United States. Few persons are aware that weeds cost you about \$2 or \$3 an acre annually, on the average, as farmers. Just how much weeds cost you each year on the basis of hand weeding and extra-special labor as nurserymen, I do not know, but it must be tremendous.

With the new weed-killing chemicals coming on the market, considerable research must be done in this direction. I am convinced the cost of weed control in your nurseries can be cut a great deal provided research can be carried on in proportion to the problem. Research should be carried on in your own state institutions and by the United States bureau of plant industry.

I wish to point out very definitely that we must search further for these miraculous chemicals to control the weeds, but there must be research in the line of cultural methods of weed control as well. The average farmer is still entirely dependent upon cultural methods of control, such as rotation, summer fallow, cultivating, etc. In proportion to the problem, we are doing little investigational work in weed control. Those who are now working on the problem have done miraculously well with the meager funds and facilities available.

Research has more adequately taken care of the field of fruit growing through the state colleges and

experiment stations and the United States bureau of plant industry. Many new excellent varieties have been developed, which have made it possible to grow plants in practically every part of our nation today. This has opened up a tremendous market for nurseries.

I do believe, however, that we have been woefully negligent in the ornamental field, with the exception of a few isolated spots in the country. I believe a great deal of work must be done on the important item of source of seeds. If we knew better what to plant in the way of ornamental items in the various parts of the state and the country, thousands of dollars could be saved annually in nurseries and by the general public. We know that millions of plants are wasted in various parts of the country each year because they are not adapted to the conditions they are placed in.

I am given to understand that the bureau of plant industry has been urged to proceed with a research program involving ornamental plants, primarily a breeding program, starting with flowers and flowering shrubs. We should support an appropriation for the bureau of plant industry of the United States Department of Agriculture for such a program. We should also urge our state organizations to do something about it.

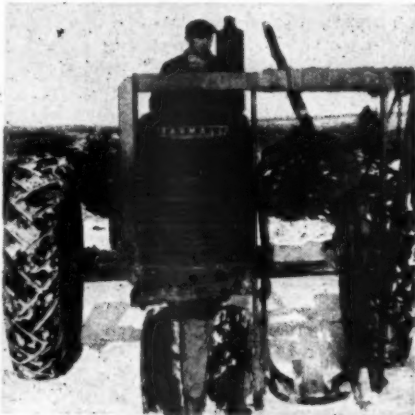
I know that the American Association of Nurserymen, through its various branches, has made every possible effort to cooperate with the state departments of agriculture and the experiment stations throughout the United States. I do know, also, through my experience as an officer in the national association, that there is not the cooperation there should be between the nursery industry and certain state inspection services in the country. Just why this is, I do not know exactly, but I have my suspicions. I know the cooperation is good in Minnesota; I cannot speak for Wisconsin, but I should suspect it is good there. I understand the cooperation is generally very good between the nursery industry in the various states in relation to the departments of horticulture, for example. But much more should be done to obtain the cooperation of the agricultural engineering departments for the development of new kinds of machinery for use in your industry.

Address by R. A. Trovatten, commissioner of agriculture of the state of Minnesota, before the annual meeting of the Wisconsin Nurserymen's Association, at Milwaukee, December 5, 1945.

SAVE MONEY... USE THE NEW ULLYETTE TREE DIGGER

Developed by 2 veteran nurserymen at Dansville. Now in use by several large nurseries.

Does good work where any other digger can be used. Easily attached to a Farmall M tractor. Requires only driver and helper to operate. Digs trees up to 3 and 4 yrs. old and 10 to 12 ft. tall.



Everything complete with instructions for attaching to your tractor, **\$350**, F.O.B. Dansville. Price includes 1 digger blade 8 ins. wide, 24 ins. deep and 24 ins. across. Order today; shipment within 30 days. A deposit of **\$100** will reserve an outfit for you. Photographs and more complete details on request.

KELLY BROS. NURSERIES, INC.
Dansville, N. Y.

All manufacturing rights reserved

You must have more cooperation with the various state organizations in the development of industry statistics, for example. I am sure that most states would be surprised, if they had satisfactory industry statistics, at the value and importance of the nursery industry in their respective states. There used to be a tendency some years ago to hide these things. With the present system of government, I can see no sense in hiding these statistical data. I can see much good by bringing them out in the open where they can be analyzed and recognized by everyone.

I believe there is much to be done in the field of general crop practices. Cooperation with your division of agronomy in the various universities and with the government is necessary. I believe that the nurserymen up to this time have benefited mainly through their own discoveries in this particular field.

I believe you should continue to place more emphasis on cooperation with plant boards throughout the country. This is rather difficult on a state level, but I do know that it can be done. I am sure that you would agree that the cooperation which the plant boards have given you in your industry on the national level, particularly the Central Plant Board, with

HEMLOCK

	Per 100	Per 1000
12 to 18 inches.....	\$4.00	\$35.00
18 to 24 inches.....	6.00	50.00
24 to 30 inches.....	9.00	75.00

For sample send \$1.00.

O. H. PERRY NURSERY CO.

Box 545

McMinnville, Tenn.

CLEARING OUT OLD BLOCKS?

We buy
in 12-ft. lengths
Chestnut, Beech.
What have you?

VARSITY LANDSCAPE SERVICE
La Fayette, Ind.

"NURSERYMEN HAVE A LONG
WAY TO GO BEFORE SATURAT-
ING THE MARKET IN MAKING
AMERICA MORE BEAUTIFUL."

(Michigan Nurserymen's Meeting).

Fill your salesyard and ware-
house with Verhalen choice nurs-
ery stock.

Wholesale Only.

VERHALEN NURSERY COMPANY
Scottsville, Texas

The **CHRYSANTHEMUM**
CATALOG you cannot afford
to be without.

WONDERLAND NURSERIES
Ellersson, Va.

**NOVELTY PERENNIAL and
ROCK GARDEN PLANTS**

Wholesale Trade List now ready.
Send for your copy.

CARROLL GARDENS Westminster, Md.

which I am well acquainted, has been most valuable.

As I go along, I wish to direct at least some of my statements to your national organization, as well as to the Wisconsin organization. The national organization will need more definite cooperation with the state inspection services, and I understand plans are under way now to accomplish that end.

Believe me, when you study the recent confidential summary on state inspection service activities, it is enough to almost scare you. Some states have practically no inspection systems, and how they can issue certificates I do not know. I am thoroughly opposed to any federal domination in any manner whatsoever of state inspection systems, but there certainly must be something done with respect to general uniformity of these systems throughout the country. Something must be done to see, too, that state inspection systems are properly financed in order to do the job.

We could cite instances in which many millions of dollars have been lost to your industry and to related trades because of inadequate inspection systems. Let me stress again that the general lack of organization and effectiveness of a number of state inspection systems is next to a catastrophe, as far as your industry and other closely related industries are concerned. I have the information to support this statement.

I want to say to you that it is up to you to get solidly back of your state inspection services in every respect. They must be built up to a higher peak of efficiency and effectiveness in their control than has ever been the case in the past. You know the reasons for this are obvious.

Let me make one or two suggestions with respect to general public relations so far as yours and similar organizations are concerned throughout the country. For example, I mean such public relations as dealing with your state forestry department, your state nursery inspection division, the conservation division and several branches of your state government from that of taxation on down the line. The same statement can be repeated as to relations with federal government units. Good public relations mean a great deal, not only in dealing with tax-paid institutions, but also in dealing with the general public. I know myself, personally, that the early nursery salesman was the pioneer mainly responsible for the planting of trees, fruits and other horticultural plants in the early days when there were no colleges and

schools of agriculture. Sometimes you men do not get credit for that. I do know that in my early days the nursery salesman was the man responsible for developing fruit, ornamental and windbreak phases of our farms. But occasionally, and not too occasionally, certain organizations did not maintain and continue those good public relations that the very early nursery salesman established.

I wish to bring out another point with respect to your very personal business, and that is honest advertising. It is tempting, I know, when you have such beautiful and tasteful things to sell, to overdo the advertising. Personally, I do not see where it is necessary to do any dishonest advertising in yours or any business. I do not accuse you of doing dishonest advertising; I do say, however, that there has been that tendency on certain occasions by a relatively few organizations. Sometimes honest to goodness enthusiasm results in what appears to be exaggeration or false advertising.

Honest labeling is another important item. I have time and again been called into sessions with respect to labeling of horticultural items sold by various nurseries. Just what can be done with respect to planting of the Delicious apple in northern Minnesota, I do not know. That is not your worry, but items should be labeled as to just exactly what they are and should be sold accordingly. If somebody wants to fool around with Bartlett pear trees and Delicious apples in northern Minnesota, and certain

other varieties that we know are not hardy there, that is his business. We should make it a point, however, to let him know the circumstances. I do believe that we have enough hardy fruits to sell in northern Minnesota and northern Wisconsin to make it worth while to emphasize those that are known to be hardy in the northern areas. I believe the nurserymen should take that initial step.

I wish you could do more to teach the dealers (stores, etc.) the proper handling of nursery stock you sell them. In the past two or three years there has been an influx of fly-by-night salesmen that caused a lot of damage to your industry in certain parts of the central states, including Minnesota. We are doing our best to apprehend them and to establish laws so that they cannot do business here. Personally, I think that we in the central states have some of the healthiest businesses in the country; certainly, all parts of the country have their healthy businesses. It is up to you people who are doing honest, hard work in this industry to help us apprehend those who are dishonest. Your industry has gone far in the last two decades in improving its own position and cleaning its own house, but I can see that a lot of additional improvements can be made.

We Offer—

EVERGREENS—In a large assortment of **PYRAMIDAL** and **GLOBE ARBORVITAE**, **PFITZER JUNIPER** and **YEW**s in grades at attractive prices. **SOME LARGE SPECIMEN EVERGREENS. SHRUBBERY** and **SHADE TREES**.

Mail want list for prices.

THE WESTMINSTER NURSERIES
Westminster, Md.

LINING-OUT STOCK OUR SPECIALTY....

Shade Tree Whips . . . a timely finished product saving 2 to 4 yrs. growing effort . . . excellent variety.

A very complete line of **ORNAMENTAL TREES, SHRUBS** and **EVERGREEN SHRUBS**, including many scarce items.

THOMAS B. MEEHAN CO.
Dresher, Pa.

ACER PLATANOIDES NORWAY MAPLES

	Per 100
18 to 24 ins.	\$ 5.00
2 to 3 ft., trans.	8.00
3 to 4 ft., trans.	12.00
4 to 5 ft., trans.	15.50
5 to 6 ft., trans.	20.00
6 to 8 ft., trans.	45.00
6 to 8 ft., ¼ to 1-in. cal., whips, per 100.	\$75.00.
8 to 10 ft., ¼ to 1-in. cal., well branched, per 10.	\$10.00; per 100, \$85.00.
8 to 10 ft., 1 to 1½-in. cal., well branched, per 10.	\$12.50; per 100, \$100.00; 1½ to 1½-in. cal. (in the ground), ea., \$1.50, plus 25¢ dug bare root;
1½ to 1½-in. cal. (in the ground), ea., \$2.00, plus 35¢ dug bare root; ¾ to 2-in. cal. (in the ground), ea., \$2.25, plus 40¢ dug bare root.	

Free baling with cash with order. 25 per cent cash with order, balance before shipment. All trees are Jap Beetle Quarantine Inspected.

STATE ROAD NURSERY
State and Sprout Rds., R. 1 Media, Pa.

"A friendly, efficient sales service"

E. D. ROBINSON

SALES AGENCY

28 So. Elm St. P. O. Box 285

WALLINGFORD, CONN.

Representing

Adams Nursery, Inc.

Bristol Nurseries, Inc.

Barnes Brothers Nursery Co., Inc.

North-Eastern Forestry Co., Inc.

A. N. Pierson, Inc.

A complete line of well grown hardy plant material

Evergreens and Lining-out Stock

Wholesale growers of

SMALL FRUIT PLANTS

Grapes, Currants and Raspberries—

our specialty.

Hydrangea P. G.

FOSTER NURSERY CO., INC.

49 Orchard St. Fredonia, N. Y.

EVERGREENS—In a large assortment of Thuja, Juniperus, Chamaecyparis and Taxus.

LARGE SIZES—Cryptomeria, Arborvitae, Pine and Moss Cypress.

SHADE TREES—Linden, Norway Maples, Oriental Planes, Oak and Ginkgo.

ORNAMENTAL—Flowering Cherries, Crab Apple and Beeches, named varieties.

BAGATELLE NURSERY

Half Hollow Hills

P. O. Huntington Station, N. Y.

KOSTER NURSERY

Division of Seabrook Farms

Wholesale Nurserymen

BRIDGETON, N. J.

Write for wholesale price list of lining-out and specimen stock in better evergreens and shrubs.

PRINCETON NURSERIES

of PRINCETON, N. J.

SUPERIOR

Hardy Ornamentals

PRIVET and BERBERIS

Splendid Stock

Write for Special Quotations

LESTER C. LOVETT

MILFORD

DELAWARE

Ornamental Trees, Shrubs and Evergreens

Write For Our Wholesale Trade List

W.-T. Smith Corporation

Telephone 2689

GENEVA, N. Y.

NORTHERN COLLECTED EVERGREENS

FERNS

PLANTS

SHRUBS

WILLIAM CROSBY HORSFORD

Charlotte, Vermont

A few unethical large operators can certainly bring ruin to the industry's house.

I see a tremendous expansion in your business (possibly I might stir up too much planting of nursery stock with such a statement). Do not let that imply that you should go right back home and plant a lot of nursery stock. I think you should listen to those of your trade who know what you should plant during the next year or two. Do not overplant, because I know what catastrophes can happen as a result of such action. I have seen our nurserymen go through that stage.

Plant carefully and plan carefully. I have reason to make that statement, because of the following fact. A certain survey indicated a short time ago that one-third of the families in the United States are interested in buying or building homes. With many homes, replanting or replacing will have to be done. Next, many memorials will be planted, and some will be living memorials, which will be the most beautiful kind, of course. Then, there will be the great expansion of putting up public buildings. There will be a tremendous expansion in road building. If I were in the position of the nurserymen at this time, I should take advantage of every one of these items, and I should not wait one single more day to do it.

TWIN CITY GROUP MEETS.

The Twin City Nurserymen's Association met December 12 at Wade's restaurant, Minneapolis, Minn., and adjourned for the business meeting to Harry Franklin Baker's studios. The following firms were represented: Holm & Olson, Inc., Rose Hill Nursery, Hoyt Landscape Nursery, J. V. Bailey Nurseries, Ruedlinger Nursery, Morten Arneson, E. Grant Perl, Harry Franklin Baker, Gould's Seed Store, Daniel's Nursery and Halla's Nursery.

The following officers were elected for the coming year: President, Gordon Bailey; vice-president, Rudolph Ruedlinger; secretary-treasurer, Paul Bass. The two years of service given by the retiring president, Morten Arneson, were recognized by the association.

The discussion centered about the suggested price schedule for nursery stock for 1946, which included some advance in prices.

IMPROVEMENTS are being made at the Fred DeLuca nursery establishment, 4941 Van Nuys boulevard, Sherman Oaks, Cal.

LINING-OUT STOCK

Here are a few items available in tree seedlings and shrubs for winter and spring shipment. Write for copy of our wholesale catalog for other items you may want.

ACER DASYCARPUM.

Silver Maple.

	Per 100	Per 1000
4 to 6 ins., s.....	\$0.75	\$ 5.00
6 to 12 ins., s.....	1.00	8.00
12 to 18 ins., s.....	1.25	10.00

QUERCUS. Oaks.

Varieties:

	Alba. White Oak.	Bicolor. Swamp White Oak.
6 to 12 ins., s.....	1.25	10.00
12 to 18 ins., s.....	2.00	15.00
18 to 24 ins., s.....	2.50	20.00

CERCIS CANADENSIS.

Redbud.

4 to 6 ins., s.....	1.50	10.00
6 to 12 ins., s.....	2.00	15.00
12 to 18 ins., s.....	2.50	20.00

LIRIODENDRON TULIPI-

FERA. Tulip Tree.

4 to 6 ins., s.....	1.00	7.50
6 to 12 ins., s.....	1.25	10.00
12 to 18 ins., s.....	1.50	12.00
18 to 20 ins., s.....	2.00	15.00
2 to 3 ft., s.....	2.50	20.00
3 to 4 ft., s.....	4.00	35.00

AESCULUS OCTANDRA.

Yellow Buckeye.

12 to 18 ins., s.....	2.00	15.00
18 to 24 ins., s.....	2.50	20.00
2 to 3 ft., s.....	3.50	30.00

ALTHAEA HIBISCUS.

Rose of Sharon. Seedlings.

4 to 6 ins., s.....	.75	4.00
6 to 12 ins., s.....	1.00	7.00
12 to 18 ins., s.....	1.50	10.00
18 to 24 ins., s.....	2.00	15.00

CYDONIA JAPONICA.

Flowering Quince. Seedlings.

Nice strong seedlings.		
6 to 12 ins., s.....	2.00	15.00
12 to 18 ins., s.....	2.25	20.00
18 to 24 ins., s.....	3.00	25.00

HAMAMELIS VIRGINIANA.

Common Witchhazel.

18 to 24 ins., s.....	5.00	40.00
2 to 3 ft., s.....	6.00	50.00
3 to 4 ft., s.....	7.00	60.00

LIGUSTRUM SINENSE.

South Privet.

The very finest seedlings we have.

4 to 6 ins., s.....	.75	6.00
6 to 12 ins., s.....	1.00	8.00
12 to 18 ins., s.....	1.50	12.00

MELIA UMBRACULIFORMIS.

Texas Umbrella Tree.

6 to 12 ins., s.....	1.50	12.50
12 to 18 ins., s.....	2.00	15.00
18 to 24 ins., s.....	2.50	20.00

JUGLANS NIGRA.

Black Walnut.

4 to 6 ins., s.....	2.00	15.00
6 to 12 ins., s.....	3.00	20.00
12 to 18 ins., s.....	4.00	30.00

SYMPHORICARPOS VUL-

GARIS. Coralberry.

L.O. grade, c.....	2.00	15.00
6 to 12 ins., c.....	2.50	20.00
12 to 18 ins., c.....	3.00	25.00

PEACH. June Buds.

	Per 10	Per 100	Per 1000
6 to 12 ins., s.....	\$1.00	\$ 8.00	\$ 75.00
12 to 18 ins., s.....	2.00	17.50	150.00
18 to 24 ins., s.....	3.00	25.00	225.00

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Heath Cling	Hale Haven
Polly Peach	Red Haven
Indian Cling	South Haven

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Coming Events

MEETING CALENDAR.

For the benefit of state association officers who wish to set the time of midwinter meetings with the minimum of conflict, the following list is given of meeting dates already made known. Secretaries of other associations are invited to notify the editor of further meeting dates as they are set.

January 2 to 4, 1946, Indiana State Nurserymen's Association, Purdue University, West La Fayette, Ind.

January 3, Missouri State Nurserymen's Association, Hotel Muehlebach, Kansas City.

January 3 and 4, Western Association of Nurserymen, Hotel Muehlebach, Kansas City, Mo.

January 8, Massachusetts Nurserymen's Association, Hotel Kenmore, Boston.

January 8 and 9, Oklahoma State Nurserymen's Association, Hukins hotel, Oklahoma City.

January 9, Maryland Nurserymen's Association, Lord Baltimore hotel, Baltimore.

January 9, Nebraska Association of Nurserymen, Hotel Cornhusker, Lincoln.

January 9, Long Island Nurserymen's Association, Stockholm restaurant, Syosset, L. I.

January 11 and 12, Iowa Nurserymen's Association, Hotel Kirkwood, Des Moines.

January 13 and 14, executive committee meeting, American Association of Nurserymen, Hotel La Salle, Chicago.

January 15 and 16, National Landscape Nurserymen's Association, Hotel La Salle, Chicago.

January 15 to 17, Illinois State Nurserymen's Association, Hotel La Salle, Chicago.

January 17, board of governors' meeting, A. A. N., Hotel La Salle, Chicago.

January 21 and 22, New England Nurserymen's Association, Hotel Statler, Boston, Mass.

January 21 to 23, short course for arborists, landscape gardeners and nurserymen, Ohio State University, Columbus.

January 23, New Jersey Association of Nurserymen, War Memorial building, Trenton.

January 24 and 25, Ohio Nurserymen's Association, Neil House, Columbus.

January 25 and 26, New York State Nurserymen's Association, New York.

January 30, Oregon Association of Nurserymen, Heathman hotel, Portland.

January 30, Connecticut Nurserymen's Association, Waverley Inn, Cheshire.

January 31 and February 1, Michigan Association of Nurserymen, Fort Shelby hotel, Detroit.

February 5 and 6, Kentucky Nurserymen's Association, Lafayette hotel, Lexington.

February 6 and 7, Virginia Nurserymen's Association, John Marshall hotel, Richmond.

February 19 and 20, Pennsylvania Nurserymen's Association, Bellevue-Stratford hotel, Philadelphia.

MARYLAND PROGRAM.

Speaker's from outside the state on the program of the annual meeting of the Maryland Nurserymen's Association, to be held January 9 at

the Lord Baltimore hotel, Baltimore, will include Frank LaBar, of LaBars' Rhododendron Nursery, Stroudsburg, Pa., and Dr. L. C. Chadwick, of Ohio State University.

Topics for discussion will include postwar planting, veterans' employment, labor, nursery management, marketing and new developments in the field of pest control, states Prof. George S. Langford, educational secretary.

MASSACHUSETTS PROGRAM.

The Massachusetts Nurserymen's Association will hold its thirty-seventh annual meeting at the Hotel Kenmore, Boston, January 8. At 10 a. m. President George Fellows will address the group and committee reports will be heard.

"The Farm Bureau and What It Has Been Doing" will be the subject of a talk by Howard S. Russell, secretary of the Massachusetts Farm Bureau Federation. John McManmon, returned veteran and director of roadside development for the state, will talk on "Future Plantings for Massachusetts Highways."

After luncheon, "Organization and Function of the Massachusetts Development and Industrial Commission" will be told by William G. Hazeltine, industrial agent for the commission.

"Up-to-date on DDT" will be the

topic of W. D. Whitcomb, research professor of entomology, Waltham Field station, Massachusetts state college. "Training for Nursery Culture" will be described by Prof. L. L. Blundell, head of the department of landscape architecture, Massachusetts state college. The meeting will close with committee reports and unfinished business.

SEVEN STARS FOR WESTERN.

The program for the convention of the Western Association of Nurserymen, January 3 and 4, at the Hotel Muehlebach, Kansas City, Mo., is announced as a 7-star event, the stars indicating the principal speakers and the annual banquet.

On the morning of January 3, the address of welcome will be delivered by Herb Boning, secretary of the Kansas City chamber of commerce. Vincent O'Flaherty, Jr., past president of the Kansas City real estate

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Green Ash, 8 to 10 ft.....	75.00
Green Ash, 10 to 12 ft.....	85.00
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Green Ash, 2 to 2½-in. cal..	130.00
Green Ash, 2½ to 3-in. cal..	160.00
White Elm, 1½ to 1¾-in. cal..	100.00
White Elm, 1¾ to 2-in. cal..	170.00
White Elm, 2 to 2½-in. cal..	225.00
White Elm, 2½ to 3-in. cal..	300.00
Hackberry, 8 to 10 ft.....	80.00
Hackberry, 10 to 12 ft.....	100.00
Hackberry, 1½ to 2-in. cal..	130.00
Hackberry, 2 to 2½-in. cal..	170.00
Pin Oak, 5 to 6 ft.....	115.00
Pin Oak, 6 to 8 ft.....	140.00
Pin Oak, 1½ to 1¾-in. cal..	100.00
Pin Oak, 1¾ to 2-in. cal..	215.00
Pin Oak, 2 to 2½-in. cal..	200.00

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board, will speak on "Home Building and Plantings."

Luncheon meetings will be held at midday by the Kansas Nurserymen's Association and the Missouri Nurserymen's Association.

In the afternoon, Prof. L. R. Quinlan, of Kansas State College, will talk on "Landscape Planting Design," illustrating his comments with colored slides and drawings. A further important speaker is scheduled for that afternoon, the name not announced yet.

In the evening will be the annual banquet, with entertainment and a prominent soprano in the person of Bernice Maledon.

Only one session will be held January 4, in the morning. Dr. August Beilmann, of the Missouri Botanical Garden, St. Louis, will talk on "Fertilization of Shade Trees," in regard to which he has made many experiments. The annual report of Richard P. White, A. A. N. executive secretary, will conclude the star features, and business will finish the session.

ILLINOIS PROGRAM.

The program for the annual convention of the Illinois State Nurserymen's Association, to be held at the La Salle hotel, Chicago, January 15 to 17, has been announced in detail by Secretary Miles W. Bryant. In conjunction with the state association, meetings will be held by the National Landscape Nurserymen's Association and the board of governors of the American Association of Nurserymen.

The first meeting of the National Landscape Nurserymen's Association will be held at 9:30 a. m., January 15, and will be open to all nurserymen. The program appears in an adjoining column.

At 10 a. m., January 15, members of the Illinois chapter of the American Association of Nurserymen will meet.

The opening convention session, at 1:30 p. m., will be opened with the address of Elmer Palmgren, president of the Illinois State Nurserymen's Association. A. H. Hill, A. A. N. president, will then address the group. He will present John W. Baringer, new director of research for the association.

"Where Do We Go from Here?" is the topic of Richard P. White, A. A. N. executive secretary, who will present some facts and figures on changing operations and costs in the nursery business. N. J. Brown, Jr., purchasing agent of Johnson & John-

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Apple, 1-yr., 18 to 24 ins.....	\$15.00
Apple, 1-yr., 2 to 3 ft.....	25.00
Apple, 1-yr., 3 to 4 ft.....	30.00
Apple, 1-yr., 4 to 5 ft.....	35.00

Double Red Delicious, Red Delicious, Yellow Delicious, Stayman Winesap, All Red Stayman, Grimes Golden, Golden Sweet.

Plum, 18 to 24 ins.....	\$25.00
Plum, 2 to 3 ft.....	35.00
Plum, 3 to 4 ft.....	45.00

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son, Chicago, will talk on "The Development and Landscaping of Industrial Areas." L. Morgan Yost, architect, Kenilworth, Ill., will speak on "New Trends in Locating and Building Houses." He will discuss new developments in home design and trends in the location of postwar homes.

Wednesday morning, January 16, the business meeting of the Illinois State Nurserymen's Association will be held. This will include the treasurer's report, committee reports and the election of officers.

At 12:15 p. m., a luncheon meeting will be held jointly with the National Landscape Nurserymen's Association. C. E. ("Dinty") Moore, Grand Rapids, Mich., agency organizer for the Mutual Life Insurance Company of New York, will speak on "Choosing and Training Men for Selling." He will give pointers on the type of person to choose as an employee and the course of training to follow in making efficient salesmen.

Prof. J. P. Porter, of the department of ornamental horticulture at Cornell University, Ithaca, N. Y., will speak on the timely subject, "Solving the Problems of Landscaping Small Properties." His lecture will be illustrated.

Thursday, January 17, a meeting

of the A. A. N. board of governors will occupy morning and afternoon. This is an open meeting to discuss postwar plans for the nursery industry and act on the proposals of the public relations committee of the association, recently published.

Plans for a design of a nursery sales grounds which were submitted in the contest sponsored by the National Landscape Nurserymen's Association will be on display in the Illinois room during the three days of the meeting.

LANDSCAPE GROUP TO MEET.

The National Landscape Nurserymen's Association will convene January 15 and 16 at the La Salle hotel, Chicago, Ill. The meeting will be opened at 9:30 a. m., January 15, with an address, "What the National Landscape Nurserymen's Association Can Do for Landscape Nurserymen," by Donald D. Wyman, president of the association. Vernon Marshall, of Marshall's Nurseries, Arlington, Neb., will speak on "The Use Landscape Nurserymen Can Make of the Nursery Sales and Display Grounds Plans." "Toward a Fuller Year of Landscape Operations" will be discussed by Milford R. Lawrence, of the Cape Cod Nurseries, Falmouth,

Mass. Mr. Lawrence specialized in landscape architecture in college. His talk will tell what can be done in out-of-season planting.

The Tuesday afternoon session and Wednesday luncheon meeting are to be held in conjunction with the Illinois State Nurserymen's Association. The program appears above.

PLAN MICHIGAN PROGRAM.

The Michigan Association of Nurserymen will hold its twenty-fourth annual meeting at the Fort Shelby hotel, Detroit, January 31 and February 1. It will be in the form of a victory celebration, when returning daughters and sons of members will be entertained.

Already plans are well under way, with John M. Carlisle, war correspondent of the Detroit News, as principal speaker at the banquet.

This will be the first meeting for Dr. H. B. Tukey, new head of the department of horticulture at Michigan State College, to meet with Michigan nurserymen. Likewise it will be the first meeting with Michigan nurserymen for John Baringer, new director of research for the American Association of Nurserymen.

H. A. Lyons, of the Associated

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Public Relations Council, will speak on "A Pattern for Prosperity." Other speakers are being contacted to make a well rounded program, to be announced in the next issue.

Hotel conditions are tight at Detroit; so it would be well to send in reservations well in advance of the meeting, making a note they are for the Michigan nurserymen's meeting, states Harold E. Hunziker, secretary.

LANDSCAPE GROUP TO HOLD EASTERN MEETING.

Plans are being made for a 1-day meeting of the National Landscape Nurserymen's Association for the eastern region, January 24, the day before the New York State Nurserymen's Association meeting, January 25 and 26, at the Hotel Pennsylvania, New York city.

A feature of the meeting will be a display of the contest plans of sales and display grounds. These plans will have been judged by that time at Chicago.

Frank Styer, of the Styer Nurseries, Concordville, Pa., is making up the program of speakers. Mr. Styer is on the executive committee of the N. L. N. A. for the eastern region.

IOWA PROGRAM.

The program for the annual meeting of the Iowa Nurserymen's Association, to be held January 11 and 12 at the Hotel Kirkwood, Des Moines, includes several important speakers.

The first session will be opened at 1 p. m., January 11, with the address of welcome by the president, J. C. Baumhoefener. Appointment of committees and the report of Secretary-treasurer Clyde H. Heard will follow.

L. L. Kumlien, of the D. Hill Nursery Co., Dundee, Ill., will speak on "Evergreen Trends." Prof. H. L. Lantz, of Iowa State College, will discuss ammate, DDT and 2,4D herbicides, and Harry Linn, Iowa secretary of agriculture, will address the association. R. P. White, A. A. N. executive secretary, will tell of affairs at the national capital.

At the dinner in the evening, the speaker will be Allan Kline, president of the Iowa farm bureau association. A floor show will follow under the direction of C. W. ("Dutch") Schmidt.

On the morning of January 12, motion pictures on Iowa nursery practices will be shown. Arthur Brayton, of the Des Moines convention



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Moline Elm, 1-in. to 2 1/2-in.

American Ash, 1 1/2-in. to 3 1/2-in.

Willow, Golden, Laurel and White,
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bureau, will speak, and Prof. B. S. Pickett will talk on "A Plan for the Introduction of Stock Developed by Iowa State College." The business session will conclude the meeting, and members of the Iowa A. A. N. chapter will hold their gathering after its close.

OHIO SHORT COURSE.

The seventeenth annual short course for arborists, landscape gardeners and nurserymen at Ohio State University will be held January 21 to 23 at Campbell Hall auditorium, on the campus at Columbus. Registration will begin at 10 a. m. at the horticulture greenhouse, where there will be inspection of tubbed evergreens and experimental work.

The program for the first day of the course has been designed for arborists, that of January 22 for landscape gardeners and that of the closing day for nurserymen. The schedule follows:

JANUARY 21, 1 P. M.

Program sponsored by the Ohio chapter of the National Shade Tree Conference.

"Pruning for Proper Tree Development." Panel discussion led by Paul E. Tilford, Ohio agricultural experiment station, Wooster. "Training and Pruning Small Fruit Trees," by Frank Beach, Ohio State University. "Training and Pruning Small Shade Trees," by Norman Armstrong, White Plains, N. Y. "Some Phases of Pruning and Training Mature Trees," by Albert Meserve, Danbury, Conn.

"Methods of Fertilizing Shade Trees." Panel discussion led by L. C. Chadwick, Ohio State University. "Drill Hole Method," by Oscar F. Warner, Waterbury, Conn. "Liquid Feeding," by S. W. Parmenter, Kent, O. "Aerofertil Method," by L. C. Petrie, Charles F. Irish Co., Cleveland, O.

Business meeting of the Ohio chapter of the National Shade Tree Conference.

JANUARY 21, 7:30 P. M.

"Costs of Arboricultural Operations." Commercial arboriculture, by Oscar F. Warner, Waterbury, Conn. City forestry, by Carl Fenner, Lansing, Mich.

JANUARY 22, 9:30 A. M.

"Experiences with Ground Cover Plants," by Victor H. Ries, Ohio State University.

"2-4-D and Other New Weed Killers," a review of recent experimental work, by C. J. Willard, Ohio State University.

JANUARY 22, 1:30 P. M.

"DDT," a review of recent experimental work, by J. S. Houser, Ohio agricultural experiment station.

Plant clinic.

JANUARY 22, 7:30 P. M.

"Landscape Design," by Charles R. Sutton, Ohio State University.

"Foundation Plantings." Panel discussion led by Victor H. Ries. Speakers: G. Walter Burwell, Burwell Nursery Co., Columbus; A. M. Grube, Lakewood Nursery, Lakewood, O.; George Siebenthaler, Siebenthaler Co., Dayton, O.; Charles R. Sutton.

JANUARY 23, 9:30 A. M.

"Nursery Stock for Florists' Trade and Christmas Decorations." Panel discussion led by Alex Laurie, Ohio State University.

"Production of Some Plants for Florists," by Alex Laurie. "My Experiences with Christmas Greens and Related Material," by L. G. McLean, Raleigh Landscape Service, Raleigh, N. C.; G. Walter Burwell, Burwell Nursery Co., Columbus.

"The Ohio Nurserymen's Association," by John Siebenthaler, Siebenthaler Co., Dayton, O.

"Nut Trees for Ohio," by Oliver D. Diller, Ohio agricultural experiment station, Wooster.

JANUARY 23, 1:30 P. M.

"Irrigation Systems and Drainage Problems," by Virgil Overholt, Ohio State University.

"Tillers and Some Other Nursery Machinery," by Glen W. McCuen, Ohio State University.

"The Effect of Tillers and Other Soil Preparation Equipment on Soil Structure," by J. Boyd Page, Ohio State University.

ROADSIDE CONFERENCE.

The fifth annual conference on roadside development will be held at Ohio State University, Columbus, February 27 and 28. Theme for the 2-day meeting is "Highway Design—Its Relationship to the Roadsides, to the Countryside, to Economic Public Use and Enjoyment."

Since last year's meeting was canceled because of travel restrictions after plans had been made, the program for this conference will contain the same subject material, brought up to postwar date.

Program subjects include: "Good Roadside Engineering Design," "The Public's Use of the Roadsides," "Limited Access Highway Design," "Design in Relationship to Economy of Maintenance and Safety to the Public" and "New Developments in Weed Control."

Formal programs are being mailed out in January. Further details may be secured from Charles R. Sutton,

department of agriculture and landscape architecture, Ohio State University, Columbus, O., or from Dallas D. Dupre, Jr., landscape architect, department of highways, Columbus 15, O.

MIDWEST TREE PROGRAM.

The Midwestern Shade Tree Conference, which was canceled last winter because of ODT restrictions, will be held at the La Salle hotel, Chicago, Ill., February 21.

The conference is being sponsored jointly by the Midwest Institute of Park Executives and region 5 of the National Shade Tree Conference. A worth-while program has been planned by the local committee on arrangements.

Charles G. Sauers, superintendent of the forest preserve district of Cook county, and George T. Donoghue, superintendent of the Chicago park district, will welcome the visitors. "Shade Tree Fertilization" will be discussed by Dr. L. C. Chadwick, of

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Ohio State University. "Selling Our Services" is the title of talks to be given by Robert Mann, superintendent of conservation, forest preserve district of Cook county, and C. L. Wachtel, Wachtel Tree Science & Service Co., Wauwatosa, Wis. W. E. Rose, park planning consultant, will talk on "The Forestry Program in the City Plan."

A group luncheon is to be held at noon, at which the speakers will be Jerome Dretzka, president of the American Institute of Park Executives, and Forrest Strong, president of the National Shade Tree Conference.

During the afternoon session wetwood of elm will be discussed by Dr. J. C. Carter, of the Illinois Natural History Survey. Another member of the survey, Dr. M. D. Farrar, will talk on "Shade Tree Insects of the Midwest and Their Control." Dr. Roger Swingle, of the United States Department of Agriculture, will speak on phloem necrosis of elm. A business meeting and plant clinic to be conducted by Dr. Chadwick will close the meeting.

According to A. Robert Thompson, local chairman, no one can afford to miss the meeting, but he says those who wish to avoid sleeping on a Grant park bench should make those hotel reservations promptly.

SOUTHWESTERN NEWS.

James C. Waldren, Bolivar, Mo., was recently discharged from the army and is starting a small nursery.

Katharina Asjes, daughter of E. Asjes, proprietor of Rosehill Gardens, Kansas City, Mo., received her discharge from the Wacs and has returned to her position as office manager of the nursery.

A problem encountered recently by L. R. Taylor & Sons, Topeka, Kan., was how to pack a shipment of nursery stock going to Uruguay, South America. The shipment is leaving here during the winter, will cross the equator and run into summer weather when it arrives at destination.

Saltsman's Flowers, which sold out at Clinton, Okla., about two years ago, has reopened at Weatherford, Okla.

A new nursery has been started by E. W. Luke at Pauls Valley, Okla. It is located two miles south of town on highway 77.

Several Kansas nurserymen were successful bidders on roadside improvement projects advertised by the state highway commission. Sutton Nurseries, Independence, bid \$1,029.99 and \$6,057 in Meade and

APPLE AND PEAR GRAFTS

We are now booking orders for Apple and Pear Grafts for shipment Spring 1946. Also will have 20,000 Apple and Pear Scions to offer.

5000 PEACH TREES

18 to 24 ins., 2 to 3 ft.

J. H. Hale, Elberta, Hale Haven, South Haven, Red Haven, Belle of Georgia, Brackett, Rochester, Red Bird, Heath Cling and a few others.

1-YEAR-OLD APPLE WHIPS

3 to 4 ft. and 4 to 5 ft.

Jonathan, Grimes, Red and Yellow Delicious, McIntosh, Baldwin, Transparent, Rome Beauty, Stayman, York and Winesap.

1000 Chinese Elm
1000 American Ash
500 Red Oak

8 to 10 ft. and 10 to 12 ft.
up to 3-in. cal.

EGYPTIAN NURSERY CO.

Farina, Ill.

RED LAKE CURRANTS**RED RASPBERRIES****Hansen's BUSH CHERRY****PARADISE ASPARAGUS****ANDREWS NURSERY CO.**

FARIBAULT, MINN.

2,000,000 STRAWBERRY PLANTS

Blakemore, Missionary, Dunlap, Ambrosia, New Robinson, Aroma, Evermore Everbearing (Minnesota 1166).

Write for quotations on wholesale lots.

MULLINS PLANT FARM

S. E. Mullins, Prop.

410 Brookfield Ave., Chattanooga 4, Tenn.

Grapevines, Currant Roots,
Currant Cuttings and Berry Plants.

Small Fruit Specialists.

WEST HILL NURSERIES

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Since 1875

WASHINGTON ASPARAGUS ROOTS

1-yr. and 2-yr.

The very best roots we have ever grown. All state inspected. Can furnish in quantity lots. Write for prices.

PAW PAW NURSERIES

Frank Nelson

Paw Paw, Mich.

APPLE and PEAR GRAFTS

We are now booking orders for Apple and Pear Grafts for shipment spring 1946. Also have some scions to offer.

MISS E. SCHULZE.

Caseville, Ill.

Ness counties respectively. Cook & Cone, Ottawa, bid \$3,217 in Ness county. Tole Landscape Service, Independence, was low with a bid of \$1,823 in Marshall county. Kansas Landscape & Nursery Co., Salina, bid \$3,435 in Rush county.

CENTRAL CALIFORNIA CHRISTMAS PARTY.

The gang was out in full force for the annual Christmas meeting of the Central California Nurserymen's Association, at Palo Alto, December 13. As is usual at this meeting, there was no speaker and no business was taken up. The officers elected the preceding month took office. Each of the retiring officers made a graceful little talk as he passed his duties on to his successor. The new secretary, Juel Christensen, took over with the most apprehension, and well he might, for Charles Burr, of the California Nursery Co., had done a splendid job in the three years he held office. Three years is the maximum that any officer can hold a position in the association, though by electing Mr. Burr to the board of directors the membership feels it will be able to have the continued use of his advice.

The newly elected president, James Wilson, of Peters & Wilson, Millbrae, was a good selection, and with his enthusiasm and ability at the head, 1946 bids well to be one of the good years for the association.

The formal entertainment was provided by Rena Marcell, well known in the San Francisco area. Her accordion started things off and her persuasions kept the boys singing. Frank Weller, of the Pacific Guano Co., did a good job as M. C. L. C. Crane, who is now in business for himself furnishing such supplies as nurserymen need and can be had these days, was back at his annual job as Santa Claus. The job is to take from the Christmas tree the small presents brought by the members and, from the size and the shape of the package, fit it to someone who is there and still be sure the gift does not go back to the donor.

A special guest at the meeting was Charles S. Burr, of Manchester, Conn., who happened to be west on a business trip. Mr. Burr hit California during one of its unusual weather spells and suffered from the low 40-degree weather.

The next meeting of the association will be held at Niles, January 10.

A special meeting of the executive committee was held to go over special problems of the group. Present



Introducing the NEW STREAMLINER Everbearing Strawberry

EXCELLENT — Firm shipping berry; rich, radiant red color; full strawberry flavor; good canner and freezer; heavy bearer; excellent aroma; sturdy plant with luxurious green foliage.

Plants are available in four colors or in black and white of the new Streamliner strawberry for use in your catalogs.

Items to offer for 1945-46 Delivery

BERRIES

RASPBERRIES
Cumberland
Cuthbert
New Washington
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BOYSENBERRIES
YOUNGBERRIES
LOGANBERRIES
NECTARBERRIES
THORNLESS EVERBEARING
BLACKBERRIES
THORNLESS YOUNGBERRIES
THORNLESS BOYSENBERRIES
STRAWBERRIES—October delivery.

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Marshall
Improved Oregon
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Brightmore
EVERBEARING STRAWBERRIES
Gem
Wastodon
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Rt. 4, Hillsboro, Ore.

SHERWOOD NURSERY CO.
EVERGREENS - Propagators & Growers
141 S. E. 65th Ave., PORTLAND 16, ORE.

at the meeting were Jack Lincke, executive secretary of the state association, and Paul Moulder, president. W. B. B.

TRI-COUNTY GROUP MEETS.

The Tri-County chapter of the California Association of Nurserymen met at Santa Barbara, November 29. Special guests were Paul Moulder, state association president, and Jack Lincke, state secretary. They reported on the accomplishments of the state association, its aims and objectives. Frank Smith, speaker of the evening, outlined the Blue Cross Medical Service and explained its application to employee groups.

Walter J. Knecht, Sec'y.

OREGON SURVEYS BEGUN.

In accordance with the provisions of the bill passed by the 1945 session of the Oregon legislature, work has been started to provide for systematic surveys to determine the presence and spread of dangerous insect pests and diseases within the state.

One disease of particular concern to the nurseryman is peach wart, which has been found in a few localities in the Willamette valley. It is

CHERRY RED RHUBARB

STRAWBERRIES, RASPBERRIES
BOYSENBERRIES, NECTARBERRIES
other **BERRIES** and **ASPARAGUS**

Write for descriptive wholesale price list.

BRENTWOOD BERRY GARDENS

140 S. Carmelina Ave.
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SHINGLE TOW

(Baled Cedar Shavings)
Immediate shipment carload lots.

MONARCH SHINGLE CO.

P. O. Box 37 North Portland, Ore.

1000 Specimen Dwarf Boxwood, 18 to 24 ins.
500 Green Aucubas, 2 to 3 ft.
150 Dwarf Alberta Spruce, 2 to 3 1/2 ft.
50 Juniper Meyer, 3 to 4 ft.
All stock with perfect fiber roots.

F. A. DOERFLER & SONS
Salem, Ore.

a virus disease transmitted through budding. With the cooperation of the few orchardists who have infected trees and care in the selection of budwood on the part of the nurserymen, this disease can probably be eradicated, at least in western Oregon, states John E. Davis, state entomologist and pathologist.

A state advisory committee, consisting of fruit men from all the fruit-growing sections of the state, has recommended that surveys be carried on to determine the extent of the Oriental fruit moth infestation. As the moth is known to be present in three Idaho counties bordering on Oregon and has been found in three counties in Washington, it is to be feared that it will be found in localities in this state

other than the two places in Malheur county from which it has been reported.

CALIFORNIA NEWS.

The San Fernando Valley Nurserymen's Association held its annual Christmas party and election of officers December 12.

The Linwood Nursery, Turlock, has developed a pecan that, it is claimed, is a heavy producer of thin-shelled pecans and seems to be entirely resistant to nematodes.

Wilbur Stribling is back with his father in the nursery business at Merced, after three years in the army. One brother is still to get his discharge.

The San Joaquin Nurserymen's Association has the largest paid-up membership in its history, and more members are coming in all the time. The group holds its meeting the last Saturday of the month, usually at Fresno. Recently elected to office were the following: President, L. E. Ingoldsby, Lindsay; vice-president, A. J. Straub, Fresno; secretary-treasurer, R. S. King, Fresno; director, S. H. Whitehorn, Fresno.

The National Broadcasting System has announced a series of talks entitled "How Does Your Garden Grow," to be prepared and presented through station KPO, the San Francisco outlet of the system, by Albert Wilson. Mr. Wilson is well known to the nurserymen in the San Francisco bay area, having been employed for several years by the West Coast Nursery Co., at Palo Alto, and is well known to amateur gardeners in the area as a well posted horticulturist who is popular at garden club meetings. The program will be broadcast at 8:45 Sunday mornings. The series announced is for fifteen weeks.

John Hartley, famed throughout California as the man who developed the Hartley walnut, the most popular variety grown in the state, died recently at the age of 82 years.

Eleven and one-half million bushels of pears were harvested from commercial pear orchards in California in 1945.

The Superior California Nurserymen's Association held its annual Christmas party at Sacramento, December 8. Each member's entire family attends this meeting, and it is a big time for the kids of all ages. The party had been suspended during the war years by this group.

The Central California Nurserymen's Association held its Christmas party at Palo Alto, December 13, with fine entertainment. W. B. B.

PORTLAND WHOLESALE NURSERY CO.

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Quality Stock

CONIFERS AND BROAD-LEAVED
EVERGREENS
SHADE AND FLOWERING TREES
FRUIT TREE SEEDLINGS
FRUIT TREES
DECIDUOUS SHRUBS
VINES AND BULBS
PORTLAND ROSES

Birch, European White, 4-yr.,
8 to 10 ft., \$1.00; 10 to 12 ft., \$1.25.
Maple, Norway, 4-yr.,
8 to 10 ft., \$1.25; 10 to 12 ft., \$1.50.
Mountain Ash, European, 3-yr.,
6 to 8 ft., 85c; 8 to 10 ft., \$1.00.
Oak, Pin. Red and Scarlet, 4-yr.,
6 to 8 ft., \$1.00; 8 to 10 ft., \$1.25.
Combination carloads to Eastern
points early Spring.

Write for our Catalog

A. MCGILL & SON

FAIRVIEW, OREGON

Wholesale Only

**GOOD WESTERN-GROWN
NURSERY STOCK**

Fruit Tree Seedlings
Flowering Ornamental Trees
Shade Trees

Grown right and packed right.
Combination carloads to Eastern
distributing points will save you
on freight.

MILTON NURSERY CO.

A. Miller & Sons, Incorporators

MILTON-Since 1878-OREGON

*Growers of a
General Line
of
Nursery Stocks*

Combination carloads to eastern
distributing points at minimum
freight cost.

AS ALWAYS— OREGON'S BEST SOURCE of GOOD ROSES

Our limited crop is reserved for
our regular customers this year.

PETERSON & DERING

*Wholesale Rose Growers
Scappoose, Oregon*

OREGON-GROWN NURSERY STOCK

We have a complete line of shade and
flowering trees, both whips and heavier
branched stock.

Flowering Cherries, Flowering
Crabs, Plums and Locusts,
Norway and Wiers Maples,
Oaks—Chinese Elm—Mountain
Ash—Birch—Hawthorns.

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NOTICE

Decreased production makes it impos-
sible to book orders for new customers.
For the duration the limited supply is
reserved for our regular trade.

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Hemet, California

PACIFIC COAST NURSERY

Specializing in fruit tree seed-
lings since 1914. We also have
Norway and Schwedler Maple,
Chinese Elm, European White Birch,
Cut-leaf Weeping Birch, Paul's
Scarlet Hawthorn and Kwanzan
Flowering Cherry. All 2-yr.-old
stock.

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CLASSIFIED ADS

Five lines, \$1.00,
each additional line 20 cents,
per insertion.

BERRY PLANTS

STRAWBERRY PLANTS, certified by state department of agriculture. Grown on new land. We are now booking orders for spring delivery as follows: Blakemore, \$5.50 per 1000; Ambrosia, Tenn. Supreme, Premier, Dunlap, \$8.50 per 1000; Gem Mastodon, Progressive Everbearing, \$10.00 per 1000; Minn. 1166 (named Evermore), \$15.00 per 1000. 50 per cent deposit assures you plants at the proper time next spring.

ROMINES PLANT FARM, Dayton, Tenn.

A STRAIN OF DUNLAPS propagated from one superior plant, selected in 1943; deep rooted, vigorous, disease resistant. Plants with roots 5 to 7 ins., \$10.00 per 1000. Plants with roots 7 to 10 ins., \$15.00 per 1000. Plants with roots 10 to 12 ins., \$25.00 per 1000. Plants with roots 12 ins. and up, \$35.00 per 1000. Field run with roots 5 to 10 ins., \$12.50 per 1000. Options on field run plants in amounts up to 1/4 of order, 15c per 100.

LONERGAN'S NURSERY, West Bend, Wis.

CONCORD GRAPE CUTTINGS taken from young thrifty vineyard (20 acres); carefully made by experienced workmen; tied 100 to bunch, \$5.00 per 1000; Fredonia, \$8.00 per 1000. Can ship any time this winter. Strong, 1-yr. Concord vines, \$8.00 per 100, \$75.00 per 1000. All F.O.B. here.

IDEAL FRUIT FARM, Stillwell, Okla.

CULTIVATED BLUEBERRY PLANTS; terrific demand; no unusual matter to clear \$1000.00 per acre from blueberries; stock very scarce; prices quoted; deposit holds stock; several varieties; big demand for plants from retail trade.

WARREN SHINN, Woodbury, N. J.

EVERBEARING STRAWBERRY PLANTS Gem, Gemzsa, Minn. 1166 and Streamliner. Have been supplying the trade with good plants for 25 years.

DOLLAR NURSERY, Bloomfield, Ia.

CUMBERLAND RASPBERRY, No. 1 tips, \$4.00 per 100, \$30.00 per 1000. No packing charge.

BLUE RIDGE GARDENS, Roanoke, Va.

If you don't find what you want
try a Classified Ad
under the heading "Wanted."
It's cheaper than mailing out a want list.

BULBS

TULIPS

	Per 1000 \$10 to 10 cm.	Per 1000 \$10 to 10 cm.
Clara Butt, pink.....	\$30.00	\$35.00
Kansas, white.....	30.00	35.00
Bleu Aimable, purple.....	30.00	35.00
Fantasy, Parrot, pink.....	30.00	35.00
Bronze Queen, bronze.....	30.00	35.00
Yellow Perfection, bronze.....	30.00	35.00
Mrs. Moon, yellow.....	30.00	35.00
Inglecombe Yellow, yellow.....	30.00	35.00
Inglecombe Pink, pink.....	30.00	35.00
Princess Elizabeth, pink.....	30.00	35.00
Prof. Rauwenhof, red.....	30.00	35.00
Inglecombe Scarlet, red.....	30.00	35.00
William Pitt, red.....	30.00	35.00
Pride of Haarlem, red.....	30.00	35.00
City of Haarlem, red.....	30.00	35.00
Farncombe Sanders, red.....	30.00	35.00
Mixed Tulips.....	25.00	30.00

For immediate shipment.

Guaranteed high quality.

100 of variety at 1000 rate.

GILMORE PLANT & BULB CO., INC.

Julian, N. C.

GROWER'S SPECIAL

The most popular bouquet Glad in our garden.

BUCKEYE BRONZE, a bronzy orange-brown, very beautiful, splendid for florists' work.

10 large, 20 medium, 30 small bulbs, and 200 bulbets, value, \$7.50; trial offer, \$6.50 prepaid. Catalog on request.

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Box 394 Sioux City, Iowa

Offering January shipment of Gladioli, Dahlias, Cannas, Tuberose and Peonies. Send us your want list or write for a price list.

GILMORE PLANT & BULB CO., INC.

Julian, N. C.

Grow more Margaret Fulton, the best florists' Glad. Nice blooms from No. 4, and No. 5 bulbs.

10,000 No. 4, \$180.00 per lot.

10,000 No. 5, \$125.00 per lot.

Another splendid florists' Glad-Gardenia.

10,000 No. 4, \$180.00 per lot.

10,000 No. 5, \$130.00 per lot.

Half lots, same price. Catalog on request.

CUTLER & VENNARD NURSERY

Box 394 Sioux City, Iowa

EVERGREENS

EVERGREEN CUTTINGS	Per 1000
5000 Andorra Juniper.....	\$13.00
5000 Pfitzer's Juniper.....	16.00
5000 Canadian Hemlock.....	13.00
2000 Chinese Or. A.V.D.....	13.00
2000 Retinospora plumosa.....	13.00
5000 Am. A.V.D. green.....	11.00
Fresh from fields. Half of foliage removed.	
Ready to plant. Well packed. Shipped prepaid, now or later.	

WHERRY'S NURSERIES, St. Marys, W. Va.

Austrian Pine, 3 to 4 ft., B&B.....	\$2.50
Scotch Pine, 3 to 4 ft., B&B.....	2.25
Scotch Pine, 4 to 5 ft., B&B.....	2.00
Scotch Pine, 5 to 6 ft., B&B.....	2.50

Can furnish carload lots.

CAPITOL GARDEN NURSERIES

4200 N. May Ave., Oklahoma City, Okla.

We will trade lining-out stock of forest-grown Hemlock, Kalmia, Rhododendron, Fringe-tree, for bulbs, plants, evergreens R.C.

BABER'S PLANT FARM

Box 18 Mabscott, W. Va.

EVERGREEN LINERS

Seedlings and transplants for Spring 1946.

Write for list.

SUNCREST EVERGREEN NURSERIES

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FRUIT TREES

FINE DORMANT BUDDED FRUIT TREES

We have a fine lot of dormant budded

Peach and Apple trees in the following

grades:

Apple and peach, 3/4-in., 5 to 7 ft.,

Apple and peach, 1 1/2-in., 5 to 7 ft., 65c ea.

Apple and peach, 9/11-in., 4 to 5 ft., 55c ea.

Apple and peach, 7/9-in., 3 to 4 ft., 40c ea.

Ilex Opaca (American Holly), carload lots, up

to 7 and 8 ft.

DURANT NURSERY CO., Durant, Okla.

Ask for our available list of APPLE

TREES, 5/16-in., 35c; 7/16-in., 40c; 9/16-in.,

50c; for 50 trees or more, 17 varieties.

HOME NURSERIES

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HARDY PLANTS

HARDY CHRYSANTHEMUMS

These listed below are surplus from our stock section, grown for winter propagation. They are husky, clean, and will be shipped with all stolons intact. Quantities in all varieties are extremely limited.

(Less than 25 at the ten rate, 25 and over at the 100 rate.)

Variety	Per 10	Per 100
Algonquin, double yellow dec.....	\$3.00	\$25.00
Crimson Glory, ruby-red pompon.....	3.00	25.00
Cydonia, double orange-mahogany.....	3.00	25.00
Early Wonder, soft pink pompon.....	3.00	25.00
Early Joan Helen, rich garnet.....	4.00	30.00
Eureka, Giant, new orange-bronze.....	4.00	35.00
Harbor Lights, cream-yellow pompon.....	4.00	35.00
White Jewell, white pompon.....	4.00	35.00
Mrs. Pierre S. DuPont, double.....	4.00	35.00
Pale Moon, sulphur-yellow.....	4.00	35.00
double.....	3.00	25.00
Pink Charm, pink duplex.....	3.50	30.00
Polar Ice, bright, double white dec.....	4.00	35.00
Rose Glow, raspberry-rose.....	3.00	25.00
Ryckoff Glory, large double yellow.....	3.00	25.00
Sept. Bronze, red-bronze pompon.....	4.00	30.00
Sept. Cloud, ivory-white pompon.....	4.00	30.00
Sept. Gold, yellow pompon.....	4.00	30.00
Sequoia, mellow amber.....	3.00	25.00
White Knight.....	4.50	40.00

CUSHIONS

Champion, deep strong bronze.....	3.50	30.00
Commander, huge deep red.....	3.50	30.00
De Luxe, red.....	4.00	35.00
E. A. Guest, red pompon-type.....	2.50	30.00
Yellow Supreme, new form XXX.....	4.50	40.00
Marjorie Mills, red-bronze.....	3.50	30.00
Mystery Glynn, red Cascade.....	3.50	30.00
Serena, new white.....	4.50	40.00
Santa Claus, burgundy.....	3.00	25.00
All of the above have been properly touched by our conditioning northern lake frosts and are available for immediate delivery while they last.		

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FLORISTS' FORCING FUNKIA

VARIEGATA.

These are now properly frost cured and ready for immediate shipment. Just heel them into any convenient area and pot when required for sale, after ten weeks' forcing period in carnation temperatures. Plants husky, field-grown, and hold 3 to 5 eyes or better. \$2.00 per 10; \$16.00 per 100.

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MERTENSIA VIRGINICA

The true Virginia Bluebell, hardy northern-grown, 3 to 5 eyes or better. Immediate delivery while they last. \$2.00 per 10, \$15.00 per 100.

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AMERICAN NURSERYMAN

PEONIES

3 to 5-eye divisions	Per 100	Per 1000
Baroness Schroeder, white.....	\$50.00	\$450.00
Edulis Superba, pink.....	27.00	250.00
Felix Crousse, red.....	25.00	250.00
Festiva Maxima, white.....	27.00	250.00
Floral Treasure, pink.....	27.00	250.00
Fragrans, red.....	27.00	250.00
Lady Leonora Bramwell, pink.....	27.00	250.00
Moderate Guerlin.....	50.00	400.00
Queen Victoria, white.....	27.00	250.00
Sarah Bernhard, pink.....	45.00	400.00
Peonies according to color.....	25.00	200.00

PHIL LUTZ PEONY FARMS, Boonville, Ind.

HARDY ASTERS

Strong, vigorously developed, 1-year plants,

generously suckered and real producers.

	Per 10	Per 100
Blue Gown, finest light blue.....	\$2.25	\$18.00
Clara, showiest blue.....	2.00	15.00
Mount Everest, best white.....	2.00	15.00
Queen Mary, blue tinted orchid.....	2.25	18.00
Red Cloud, vigorous bright red.....	2.50	20.00
Royal Blue, deep blue.....	2.25	18.00
Royal Pink, bright pink.....	2.25	18.00
Sunset, sunset-pink.....	2.25	18.00

THE JOSEPH F. MARTIN COMPANY

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GAILLARDIAS

Strong, husky, originally field-planted out of pots and now fully mature. Varieties:

Burgundy, wine-red; Dazzler, yellow and maroon; Dwarf Goblin, compact yellow and red; Grandiflora Superba, all colors and all summer flowering; Tangerine, orange. All varieties: \$2.00 per 10; \$15.00 per 100.

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HELIANTHUS

Two superb tall, cut flower varieties, flowers of novel form and tremendously popular.

	Per 10	Per 100
Coronation, double, yellow.....	\$2.25	\$18.00
Loddon Gold, double, dahlialike, yellow.....	2.25	18.00

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P. O. Box 189, Painesville, Ohio

ARTEMISIA

SILVER KING: The bright silver form to cut fresh and dry for winter use. \$2.25 per 10; \$18.00 per 100.

SILVER QUEEN: The huskier type. Our selected species may be dried just as Silver King. \$2.00 per 10; \$15.00 per 100.

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HARDY FERNS

Maidenhair (Adiantum Pedatum). Generous northern-grown clumps suitable for forcing or outdoor planting. \$2.00 per 10, \$15.00 per 100.

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ACHILLEA BOULE DE NEIGE (Snowball)

Beautifully developed, heavily runnered field clumps of this universally desired, summer-long, hardy, white florists' filler. \$1.75 per 10; \$22.00 per 100.

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Pink Beauty, a stalwart 30-in. clean shell-pink and Garnet, a sparkling red, both fully developed, field-grown for immediate delivery. \$2.25 per 10; \$18.00 per 100.

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MONARDA

Didyma Cambridge Scarlet and Dahlia-town Orchid, either variety at \$2.00 per 10; \$15.00 per 100.

THE JOSEPH F. MARTIN CO.

P. O. Box 189 Painesville, Ohio

VIOLETS—Hardy Forcing

	Per 10	Per 100
Frey's Fragrant.....	\$2.00	\$15.00
Princess of Wales.....	2.00	15.00

THE JOSEPH F. MARTIN COMPANY

P. O. Box 189, Painesville, Ohio

TRITOMA PFITZERI

We have about 1000 strong 1-year field plant to offer this fall. These will flower next year. \$2.00 per 10; \$15.00 per 100.

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EUPATORIUM (Hardy Ageratum)

Lavender-blue, a fine florists' perennial. 1-year, field-grown, \$1.75 per 10, \$12.50 per 100.

THE JOSEPH F. MARTIN COMPANY

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PHLOX SUBULATA ATROPURPUREA

Rich amaranth-red, strong, whole clumps. \$2.00 per 10; \$15.00 per 100.

THE JOSEPH F. MARTIN CO.

P. O. Box 189 Painesville, Ohio

LIATRIS, SEPTEMBER GLORY

Fully mature, positive flowering in next season. \$2.00 per 10; \$15.00 per 100.

THE JOSEPH F. MARTIN CO.

P. O. Box 189 Painesville, Ohio

VIOLA JERSEY GEM

Strong field clumps. \$2.25 per 10; \$17.50 per 100.

THE JOSEPH F. MARTIN CO.

P. O. Box 189 Painesville, Ohio

LILY OF THE VALLEY

Holland strain, generous clumps, \$2.00 per 10, \$16.00 per 100; pipe, \$2.00 per 100.
THE JOSEPH P. MARTIN COMPANY
 P. O. Box 189, Painesville, Ohio

HARDY DAISIES

Ether Read, div., \$12.50 per 100.
 Double White Swan, 2 ins., \$8.00 per 100.
 Supreme, giant single, 2 ins., \$12.00 per 100.
STRATFORD GARDENS, Delaware, Ohio

SEEDS

Let us figure with you on your seed requirements in Red Cedar, Osage Orange, Russian Olive, Catalpa, Coffee Bean and other western species.
RIGDON'S TREE SEEDS, Stillwater, Okla.

SHRUBS AND TREES

WHOLESALE PRICES ON STOCK AVAILABLE FOR SPRING 1946.

All stock of good quality, grown in open field rows or beds. No orders can be accepted after February 10.

ACER SACCHARUM (Sugar Maple). Per 100
 700 3 to 4 ft., X Br., Straight.....\$23.40
 \$90.00 per 500.

300 4 to 5 ft., X Br., St.....39.00
 300 5 to 6 ft., X Br., St.....58.00
 300 6 to 7 ft., X Br., Heavy.....95.00
 300 7 to 8 ft., X Br., Heavy.....120.00

SORBUS (American Ash).
 100 2 to 3 ft., X Br., St.....21.00
 100 3 to 4 ft., X Br., St.....38.00
 100 4 to 5 ft., X Br., St.....44.00

THUJA (American Arborvitae).
 1000 8 to 10 ins., edigs., St.....9.00
 \$40.00 per 500.

1000 10 to 15 ins., edigs., St.....13.00
 \$55.00 per 500.

240 10 to 15 ins., Tr., St., Br.....17.00
 240 12 to 16 ins., X, St., Br.....19.00

FAGUS (American Beech).
 300 12 to 15 ins., X, St.....7.00
 100 15 to 24 ins., X, St.....12.00

CORNUS (White-flowering Dogwood).
 300 2 to 3 ft., X Br., St.....19.00
 300 3 to 4 ft., X Br., St.....35.00
 100 4 to 5 ft., X Br., St.....44.50

CERCIS (American Redbud).
 200 2 to 3 ft., X Br., St.....23.50
 200 3 ft., X Br., St.....27.00
 240 4 ft., X Br., St.....34.50

100 4 to 5 ft., X Br., St.....43.00
GIANT VICTORIA RETUBA.

300 1 to 1 1/4-in. cal., whole roots.....19.00
RHODODENDRON MAX.

100 6 to 10 ins., X, 1 to 4 stalks.....23.00
 100 10 to 12 ins., X, 1 to 4 stalks.....25.00

NORWAY SPRUCE.
 200 8 to 10 ins., edigs., St.....10.00
 100 12 to 18 ins., XX, well Br., 1/2-in. cal. 26.00

PFITZER JUNIPER.
 100 12 to 15 ins., XXX, bushy.....48.00
 100 15 ins., XXX, bushy.....65.00

TSUGA (Canadian Hemlock).
 1000 8 to 10 ins., edigs., St., Br.....9.00
 \$40.00 per 500.

300 10 to 15 ins., edigs., St., Br.....15.00
 200 12 ins., X, St., Br.....19.00

ANDORRA JUNIPER.
 100 10 to 12 ins., XXX, bushy.....20.00

NOTE: Not much of the above stock is at our St. Marys nursery. Can inspect it here after March 1. If you send check to cover with your order we will pack free and pay shipping charges. Samples on request. We ship C.O.D. if you wish.

WHERRY'S NURSERIES
 Phone 9-F-2 St. Marys, W. Va.

HARDWOOD CUTTINGS

Uniform length, 6 inches.

Per 1000
 Cornus alba sibirica.....\$4.00
 Cornus amomum.....4.00
 Cornus paniculata.....4.00
 Cornus flavrims.....5.00
 Elder, Cutleaf.....3.00
 Forsythia intermedia.....3.00
 Forsythia intermedia spectabilis.....4.00
 Lonicera maackii.....4.00
 Lonicera bella albidia.....3.00
 Lonicera bella rosea.....4.00
 Lonicera morrowi.....3.00
 Hydrangea A. G.....6.00
 Hydrangea P. G.....6.00
 Lilac rothomagensis.....4.00
 Philadelphus grandiflorus.....4.00
 Philadelphus, Bouquet Blanc.....4.00
 Physocarpus opulifolius aureus.....5.00
 Physocarpus opulifolius nanus.....4.00
 Ligustrum ibota.....3.00
 Ligustrum, Regel (true).....3.00
 Ligustrum, Amur North.....3.00
 Spiraea biloba rosea.....3.00
 Spiraea froebelii.....3.00
 Spiraea trichocarpa.....3.00
 Spiraea thunbergii.....3.00
 Spiraea vanhouttei.....2.50
 Populus, Lombardy.....4.00
 Willow, Kieffer's weeping.....4.00
 Viburnum, Snowball.....4.00
 Viburnum dentatum.....4.00

Cash with order, please.
SCOTCH GROVE NURSERY
 Scotch Grove, Iowa

LINING-OUT STOCK

We have a full assortment of Azaleas and other Broadleaves, Evergreens, Ornamental Shrubs and Trees, also whip-grade Trees. Send for a new list.

THOMAS B. MEEHAN CO.
 Dresher, Pa.

25,000 Sycamore Trees, also Shrubs, 100,000 8-in. cuttings; 10,000 lbs. Kentucky Coffee Beans, 25c per lb.; Osage Orange, 70c; Sycamore Platinus, 40c; Allanthus, 50c; Regels and Amur River North Privet, 70c; Catalpa, 65c.

SCHROEDER NURSERY CO.

Granite City, Ill.

20,000 CAMELLIA JAPONICA in 4 1/2-in. pots; size, 8 to 12 ins. from rooted cuttings; double pink; fast-growing; hardy; good for blooms or grafting stock; no loss in transplanting; weight, 1 lb. ea.; \$50.00 per 100, \$450.00 per 1000.

FORD'S NURSERY, Box 509, Magnolia, Miss.

ROSA MULTIFLORA JAPONICA SEEDLINGS—Thorny type, 3 to 4 mm., 4 to 6 mm., 6 to 8 mm. Write for prices stating quantity wanted.

BROWN BROTHERS CO.

Brighton St., Rochester 10, N. Y.

WHITE DOGWOOD

Nursery-grown, healthy, heavy.
 6 to 6 ft.....\$1.00
 6 to 8 ft.....1.50
 8 to 10 ft.....2.00

BLUE RIDGE GARDENS, Roanoke, Va.

Special offer of French Hybrid Lilacs. Specimen stock. Guaranteed true to name. All of the best cut flower varieties. Write for list.

DEERFIELD NURSERIES

Deerfield St. P. O., N. J.

Container-grown CAMELLIAS of Merit

the Best from the Far West.

J. S. TORMEY

Tormey's Gardens, Temple City, Cal.

Ask prices **WAXLEAF LIGUSTRUM**, bushy. Tempting prices if you send truck.

Sizes up to 4 ft.

WATSON NURSERY, Monticello, Fla.

WHITE-FLOWERING DOGWOOD.

A fine block of 300, 6 to 8 and 8 to 10 ft. Given space. Nursery-grown.

C. A. MAZUY & SON

Columbus, Ind.

100,000 CAMELLIA JAPONICA rooted cuttings, double pink, fast-growing, hardy.

4,000 FORMOSA AZALEA rooted cuttings, lavender. \$10.00 per 100, \$90.00 per 1000.

FORD'S NURSERY, Box 509, Magnolia, Miss.

20,000 CHINESE ELMS, 3 ft. up to 16 ft. Shade trees, hedges and windbreaks.

At reasonable prices. For fall and spring.

GRAND ISLAND NURSERIES

Grand Island, Neb.

VEGETABLE ROOTS

WITLOF CHICORY ROOTS, known as French endive; pays well; easily forced in any cellar, greenhouse, warm room; excellent salad, use mayonnaise dressing; \$2.50 per 100, \$18.00 per 1000.

WARREN SHINN, Root Specialist, Woodbury, N. J.

MISCELLANEOUS

STRAWBERRY PLANTS, \$8.00 per 1000. Varieties: Dunlap and Blakemore.

GRAPES, 1-yr., No. 1, at wholesale prices. Per 100 Per 1000 Per 10000

Fredonia.....\$11.00 \$100.00 \$ 900.00
 Moore Early.....11.00 100.00 900.00
 Campbell Early.....11.00 100.00 900.00
 Delaware.....12.00 110.00 1000.00
 Niagara.....11.00 100.00 900.00
 Cynthiana.....12.00 110.00 1000.00

1-YR. APPLE WHIPS, at wholesale prices. 2 to 3 ft., 25c ea.; 3 to 4 ft., 35c ea.; 4 to 5 ft., 45c ea. Varieties: Red Delicious, Red Jonathan, Yellow Delicious, Red Stayman, Transparent, Mammoth Black Twig and Ada Red.

THORNLESS YOUNGBERRIES, \$5.00 per 100, \$45.00 per 1000.

BENTON COUNTY NURSERY CO., INC.
 Rogers, Ark.

PEACH, popular varieties, 12 to 18 ins., 15c; 18 to 24 ins., 17c; 24 to 30 ins., 25c; 30 to 36 ins., 35c; 36 to 48 ins., 50c; 4 to 5 ft., 75c; 6 to 7 ft., \$1.00.

ROSES, 2-yr., No. 1, 50c; No. 2, 45c; 1-yr. forced buds, 5c ea. less. Most standard varieties.

AUSTIN DEWBERRIES, \$12.50 per 1000. Also Plums, Apples, Figs, Grapes, Blackberries, Youngberries, Boysenberries, Canas, Pecans, Persimmons and many others. Write for list.

FRIOL FLORAL & NURSERY,

Cleburne, Tex.

1945 crop **PEACH PITS**, southern collected. High germination. Small seeds, \$3.50 per bu.; medium, \$2.50 per bu.; large, \$2.00 per bu. Chinese Arborvitae seeds, \$3.00 per lb.

Peach, Plum, Apricot, 1 ft., 20c; 2 ft., 30c; 3 ft., 40c; 4 ft., 60c; 5 ft., 70c; 6 ft., 80c. Seedling peach trees for grafting or budding, \$25.00 per 1000, \$3.00 per 100. Cash with order. Riverdale Nurseries, Riverdale, Ga.

HELP WORLD WAR II VET—Have thousands of evergreen cuttings which need rooting. Will pay reasonable price. Boysenberries, regular \$6.00 per 100, \$50.00 per 1000.

ARVIE D. MAXWELL

R.F.D. 1, Dyersburg, Tenn.

WILBER and HELEN YEARSLEY, north central states representatives for Hyper-Humus, a cultivated, fertilized and pulverized reed peat, will be at the Hotel La Salle, Chicago, for the Illinois Nurserymen's Convention, and Fort Shelby hotel, Detroit, for the Michigan Nurserymen's Convention. Hyper-Humus top-dresses the finest, most highly publicized lawns in the east. Cuts transplanting losses to a minimum. Now available on your siding at approx. 70c per 100 lbs. Rapid seller in Detroit at \$3.50 per 100 lbs. One distributor only to a locality.

SUPPLIES

BAMBOO CANE STAKES

DYED GREEN—Pencil Thickness

Contents	Price
Per Bale	Per Bale
***15 ins.	2000 \$ 7.30
***2 1/2 ft.	2000 13.85
***3 ft.	2000 16.55
***3 1/2 ft.	2000 19.50
***4 ft.	2000 22.30
***4 1/2 ft.	2000 24.60

NATURAL COLOR—Medium Heavy

Contents	Price
Per Bale	Per Bale
***3 ft.	1000 \$12.50
***4 ft.	1000 17.00
***4 1/2 ft.	1000 18.00
***5 ft.	600 11.50
***5 1/2 ft.	100 5.00

NATURAL COLOR—Extra Heavy

Contents	Price
Per Bale	Per Bale
***5 1/2 ft.	250 \$13.00
***6 ft.	200 12.50
***7 ft.	150 11.00
***8 ft.	100 8.50

F.O.B. New York and Chicago. Bale lots only.

***These sizes available for prompt shipment from New York.

***These sizes available for prompt shipment from Chicago.

***These sizes available for prompt shipment from both New York and Chicago.

Quantity discounts: 10 bales up, less 8 per cent. 25 bales up, less 7 1/2 per cent.

McHUTCHISON & CO.
 95 Chambers St. New York 7, N. Y.

WOOD PLANT BANDS.

Used by the largest growers of Carnations, Snaps, Stocks, perennial plants and all plants to be transplanted in the greenhouse or outdoors. Get your supply now, also, for Vegetable plants for resale.

Weight Per
 Size in ins. per 1000 1000

No. M-310 1 1/4 x 1 1/2 x 2 1/412 lbs. \$2.95

No. M-320 2 x 2 x 2 1/416 lbs. 3.30

No. M-340 3 1/2 x 2 1/2 x 321 lbs. 4.10

No. M-360 3 x 3 x 332 lbs. 4.75

No. M-391 4 x 4 x 440 lbs. 5.60

Packed 1000 to the carton. We do not break the carton.

LIGHT WOOD FLATS.
 Suitable only for holding and shipping our Wood Plant Bands. Bands are not included at prices below.

Per 100 flats
 M-370, holds 12 1 1/4-in. bands\$2.75

M-390, holds 12 2-in. bands2.30

M-392, holds 12 2 1/2-in. bands2.75

M-393, holds 6 3-in. bands3.25

M-394, holds 6 4-in. bands3.95

Packed 100 to the carton. We do not break cartons.

AMERICAN BULB CO.

1335 W. Randolph St., Chicago 7, Ill.
 31-37 W. 27th St., New York 1, N. Y.

MEL-LO PEAT

A pure Sedge Peat, weedless, odorless, no inert matter. Contains 2 to 2 1/2 per cent nitrogen, 95 per cent humus; acidity, 5.5.

Excellent for seedlings, hardwood and softwood cuttings, transplanting evergreens and shrubs and ideal for top-dressing lawns.

1 to 10 2-bu. bags, f.o.b.\$1.25

11 to 51 2-bu. bags, f.o.b.1.10

51 to 100 2-bu. bags, f.o.b.1.00

101 to 200 2-bu. bags, f.o.b.90

Mel-lo Peat is milled and stuffed by a special process, ready to use. Adopted by the universities, agricultural colleges, nurseries and landscape gardeners. Accept no substitutes: demand Mel-lo Peat. Our guarantee: check with order, prompt shipment. Wire, phone or write.

MEL-LO PEAT CO.
 Elyria, Ohio

PROFIT WITH PERF-O-RAIN.

Rain when you want it—low pressure—rectangular strip watered—No overlap—No sprinkler heads or other gadgets—Portable lightweight pipe—Long life. Write for free folder.

W. R. AMES COMPANY OF FLORIDA, 3905 E. Broadway, Tampa 5, Florida, or **W. R. AMES COMPANY**, 160 Hooper St., San Francisco 7, Calif.

PRINTING

Letterheads, billheads, statements, cards, envelopes, tags, blotters, folders, catalogs, samples.

J. GARLAND HILL

Dept. A, Seaford, Del.

GIBRALTAR Frost Covers pay for themselves. Economical, long-lasting, ideal for windbreaks, 6 ft. wide; 50 ft., \$13.75; 100 ft., \$26.00; 150 ft., \$39.00. **NEW AMSTERDAM IMPORT**, 122 Chambers St., New York 7, N. Y.

COTTONETTE Squares are best for balling. Saves time and twine. All sizes in stock. Write **NEW AMSTERDAM IMPORT**, 122 Chambers St., New York 7, N. Y.

SUPPLIES—Continued

STAKES—Bamboo
Carefully Selected—Dyed Dark Green.

Uniform Pencil Thickness.	
No. G-31 2 ft.	Bale of 2000.....\$10.95
No. G-32 2½ ft.	Bale of 2000.....13.90
No. G-33 3 ft.	Bale of 2000.....16.65
No. G-34 3½ ft.	Bale of 2000.....19.45
No. G-35 4 ft.	Bale of 2000.....22.35

TONKIN STAKES—Bamboo

Dyed Green—Medium Heavy.	
No. G-41 2 ft.	Bale of 1000.....\$ 9.85
No. G-42 2½ ft.	Bale of 500.....7.75
No. G-43 4 ft.	Bale of 500.....8.70
No. G-44 5 ft.	Bale of 500.....11.95
No. G-45 6 ft.	Bale of 500.....13.75
No. G-46 7 ft.	Bale of 300.....7.70

We cannot break bales.
Quantity discounts, 10 to 24 Bales, 5 per cent.
25 Bales or more, 7½ per cent.
SCHUPP SUPPLY CO., Wilmette, Ill.

KNOCK-DOWN FLATS.

Made from a good grade of Southern Yellow Pine, since Cypress is not available.
Standard specifications, inside measurements.
16x12x3.....\$11.25 per 100
16x14x3.....14.25 per 100
20x14x2.....14.00 per 100
20x14x3.....16.25 per 100
22½x16x2.....15.75 per 100
22½x16x3.....18.00 per 100
All other sizes quoted on request. Prices F.O.B. Birmingham.

We are manufacturers, not jobbers. Freight to any point is a small item per Flat. Our Flats are the best. Why pay more? Our quality guaranteed. Prompt shipment, any quantity. Attach check to order.

HIGHTOWER BOX & TANK CO.
Birmingham, Ala.

SOIL HEATING EQUIPMENT.

Designed by a nurseryman and engineer for commercial propagation. Cable, soil thermostat and pilot lamp to heat 20 sq. ft., \$9.70; 40 sq. ft., \$12.10; 60 sq. ft., \$14.50; 80 sq. ft., \$16.90; 150 sq. ft., \$24.30, F.O.B. Seattle. L. N. ROBERSON CO., 1539 E. 103rd St., Seattle 55, Wash.

RUBBER. Your Rubber requirements are important. Know where to get it when you want it. Belts, rubber bands, boots, coats, gloves, hose, spray bulbs, aprons, budding strips. Get our price sheet and catalog today.

BROADWAY RUBBER MFG. CO.
Louisville 2, Ky.

SEED STORE FIXTURES

Bins, Cabinets
WALKERBILT
Penn Yan, N. Y.

WANTED

WANTED
3000 Juniper stricta, liners.
1500 Magnolia soulangeana, liners.
3000 Forsythia spectabilis, liners.
1000 Viburnum opulus sterile, liners.
500 Syringa perica (rothomagensis) liners.
1000 Cornus rubra, 18 to 24 ins.
LEO SCHRAKAMP NURSERIES, 58 to 38
210th St., Bayside, L. I., N. Y.

WANTED

Evergreens, shrubs, fruit trees, roses, raspberries, bulbs, ornamental and shade trees, lilacs, peat and other items for sales lot. Also can use liners.

F. N. SMITH NURSERY
R. D. 6, North Canton, Ohio

WANTED AT ONCE

750 Lodense Privet, 6 to 8 ins.
100 Lodense Privet, 11 ins.
100 Heckrottii H. S., either 1-yr. or 2-yr.
100 small-size English Lavender.
BARNES NURSERY
Nowata Rd., Bartlesville, Okla.

WANTED

Shrubs for landscaping. All sizes; any quantity. Give details as to location and price. Cash waiting.
Address Box No. 386, care of American Nurseryman.

WANTED

For late fall or early spring delivery, all varieties Grapes, Raspberries, Boysenberry, Asparagus and Strawberry plants.
E. W. TOWNSEND & SON, Salisbury, Md.

CLOSING DATE.

Present printing conditions require that more time be given for putting current issues of the American Nurseryman through the press. So if you send material for either the advertising or the news columns of the January 15 issue, please mail in time to reach this office by January 7.

COVER ILLUSTRATION.

Pinus Strobus Fastigiata.

The common eastern white pine is familiar to all plantsmen, but the smaller pyramidal clone is not nearly so well known. The pyramidal eastern white pine is a slow-growing form with ascending branches, forming a narrow pyramidal head or one that is sometimes nearly columnar. It is not known how large this clone will become, since it is relatively new, and few specimens now exceed twenty-five or thirty feet in height.

The foliage of the pyramidal eastern white pine has all the characteristics of the species. The needles are borne five in a cluster, are slender and soft and vary from about two and one-half to five inches in length. The twigs are greenish or greenish-brown.

The species, and from limited observation the pyramidal eastern white pine, prefers a good rich soil with ample moisture. It will succeed in sand if plenty of moisture is available, and it adapts itself to rather heavy clay soils when carefully planted. It is, undoubtedly, as susceptible to scale and blister rust as the species. Propagation is accomplished by side or veneer grafting of the clone onto the species, Pinus strobus.

The pyramidal eastern white pine will make a satisfactory small specimen tree for small home grounds. It will prove satisfactory where a narrow upright plant is desired. It, undoubtedly, will work in better as a type for tall screens than the species.

L. C. C.

[Photograph from Arnold Arboretum.]

CATALOGS RECEIVED.

Boyd Nursery Co., McMinnville, Tenn.—Wholesale price list of fruit trees, shade trees, deciduous flowering shrubs, evergreens, vines and creepers, grafting understocks and hardwood cuttings, some illustrations, 24 pages and cover, 4x9 inches.

Baker Bros. Nursery, Fort Worth, Tex.—Wholesale price list of evergreens, flowering and ornamental shrubs, shade trees and fruit trees, 16 pages and cover, 4½x6 inches.

Fruitland Nurseries, Augusta, Ga.—Retail catalog of fruit trees, flowering trees and shrubs, evergreens, camellias, roses and perennials, with illustrations, some in color, 44 pages and cover, 7¼x9½ inches.

Sherwood Nursery Co., Portland, Ore.—Descriptive wholesale price list of evergreens, deciduous shrubs and rock plants, 44 pages, 5¾x7¾ inches.

T. C. Owen & Son, Columbus, Miss.—Wholesale price list of evergreens and miscellaneous stock, 32 pages and cover, 4x9 inches.

Harlan P. Kelsey, Inc., East Boxford, Mass.—Retail price list of evergreens, deciduous trees and shrubs, perennials, rock garden plants and ground covers, some

AMERICAN NURSERYMAN

illustrations, 44 pages and covers, 5x7¾ inches.

Richmond Nurseries, Richmond Beach, Wash.—Retail price list of roses, broad-leaved evergreens, fruit trees, shade trees, deciduous flowering shrubs and vines and creepers, 4x9 inches folded.

Aldridge Nursery, San Antonio, Tex.—Wholesale price list of evergreens, shade trees, pecans and roses, 4-page folder, 4x9 inches.

W. B. Clarke & Co., San Jose, Cal.—Wholesale price list of evergreens, deciduous and flowering trees and shrubs, and climbers, 32 pages, 3¾x8¾ inches.

Griffing Nurseries, Beaumont, Tex.—Wholesale price list of deciduous and evergreen trees and shrubs, palms and gardenias, illustrated, 28 pages and cover, 7½x10½ inches.

GLADIOLUS BULBS

Why plant No. 1 or No. 2 bulbs when No. 3 and No. 4 will produce nice flowers and a strong No. 1 bulb for the second year? Try out these on the assurance that they will give excellent results.

Priced per 1000—300 same rate.

	No. 3	No. 4	No. 5
Aladdin, salmon	\$25.00	\$20.00	\$15.00
Beacon, scarlet	27.50	22.50	17.00
Gardenia, cream	26.50	22.00	16.00
Peggy Lou, pink	27.50	22.00	16.00
Rapture, pink, 10 per cent			
Maid of Orleans	25.00	20.00	14.00
Snow Princess, white	27.50	22.00	17.00
Marg. Fulton, salmon	25.00	20.00	15.00
Per 10,000	230.00	180.00	135.00
Blaze, red	23.00	18.00	14.00
Bit o' Heaven, orange		19.00	14.00
Pelegrina, blue	25.00	20.00	15.00
Wings of Song, pink with blue tinge	27.50	22.50	17.00

Subject to stock on hand.
Terms: Cash with order.

VENNARD'S NURSERY

Box 394-F

Sioux City, Ia.

Send for Our Seed List.

A. B. C.

"Supreme" Quality
SEEDS — PLANTS — BULBS
and
Growers' Accessories

AMERICAN BULB CO.

1335 W. Randolph St. CHICAGO 7
31 W. 27th St. NEW YORK 1

CONIFERS

Berberis Thunbergi

FLOWERING CRABS

Inquiries solicited on these specials and general ornamentals.

THE HOWARD-HICKORY CO.
Hickory, N. C.

North Dakota and Montana Seeds

Northern-grown Tree, Shrub and Wild Flower seeds.
Wholesale crude botanicals.

E. C. MORAN

Stanford, Mont.

OBITUARY

Captain H. R. Hillenmeyer.

Captain Henry R. Hillenmeyer, 25, died November 30 at his station in Korea, according to word received by his wife, Mrs. Lucy Taylor Hillenmeyer, of Winchester, Ky. Captain Hillenmeyer went overseas last August, after serving in the army for more than three years in this country.

The War Department message to Mrs. Hillenmeyer gave no details of his death.

The officer was a son of the late Walter Hillenmeyer and Mrs. Hillenmeyer, of Lexington, Ky.

Besides his widow and mother, he is survived by a 2-year-old son, Henry R. Hillenmeyer, Jr., and three brothers, Donald, Herbert and Walter Hillenmeyer, Jr., all of whom have returned from service.

The captain attended Campion school, in Wisconsin, and was a student at the University of Kentucky for nearly four years, entering military service in June, 1942, before being graduated. While at the university he was captain of the swimming team and a member of the R. O. T. C. and Phi Delta Theta social fraternity.

When he was sent overseas last August he was assigned to the Sixth infantry division on Luzon, being transferred later for duty in Korea.

Theodore H. Frison.

Dr. Theodore H. Frison, chief of the Illinois Natural History Survey, died December 9 at Champaign, Ill., at the age of 50. He had been seriously ill for the past year.

Born at Champaign, Dr. Frison obtained his successive degrees at the University of Illinois. He served as assistant entomologist of the state of Wisconsin, in the United States Department of Agriculture and in Illinois. He joined the state natural history survey in 1923, became acting chief in 1930 and chief in 1931. He became also director of the central states forest experiment station, United States Forest Service, in 1934. He was editor of the Journal of Economic Entomology from 1936 to 1941 and was a member of prominent scientific organizations.

William F. Knapp.

William F. Knapp, Frenchtown, Mich., died December 2 in a convalescent home where he had been for the past two years. Mr. Knapp had been confined to his bed for the past

seven years as a result of a stroke. He was 76 years old.

Mr. Knapp was born in Raisinville township. He operated a mercantile establishment at Strasburg, where he also served as postmaster. In 1896 he was elected county treasurer. He remained in office four years and then purchased the Lewis Nursery, formerly operated by the late George Lewis. Mr. Knapp conducted the business until his retirement, ten years ago.

He is survived by two sons, Lewis, Frenchtown, and Clyde, Detroit; two brothers, George J. and Edward M., Monroe, and a sister, Mrs. Daniel Hasley, Monroe.

Alvin Yarbrough.

Alvin Yarbrough, of the Yarbrough Nursery, Dallas, Tex., died December 11, after suffering a heart attack. Mr. Yarbrough had been a florist and nurseryman at Dallas for the past fifteen years. Besides his widow, he is survived by one daughter, four sons, his mother and one sister.

FRED H. KILNER, son of the editor, received his discharge early in December after nearly three years in the navy air corps and will return to college.

WANT ADS

Help and Situation Wanted and For Sale advertisements.

Display: \$2.50 per inch, each insertion. Liners: 20¢ line; minimum order \$1.00.

HELP WANTED

Man, with some knowledge of nursery stock in this section, pruning and spraying, who can design and sell small landscape plans and home orchards. Leads and salary if desired. Also, man, for foreman, who can do planting from small landscape and orchard plans, pruning, spraying and general nursery work. Both positions permanent. Give age, experience and minimum salary expected.

BLAN NURS. & LANDSCAPING
3704 Armour Ave., Ft. Smith, Ark.

HELP WANTED

Nursery Superintendent

A fine opening, with good salary, for young man conservant with ornamentals. Must be able to handle men, oversee packing and shipping and give general supervision to outside activities of modern landscape nursery located in Pacific northwest.

Address Box No. 378, care of American Nurseryman, 343 So. Dearborn St., Chicago 4, Ill.

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Nursery landscape business; 25 years in best landscape territory in the east, 40 miles from New York city; 25 acres, 1000-ft. frontage N. J. highway 24; 6 good buildings, several could be converted into dwellings; 2 trucks and other equipment; ample stock of larger-sized trees and fine yews suitable for my market; average net yearly earnings past 25 yrs., \$5000.00; net earnings 1945, \$4000.00; price, \$25,000.00. The real estate will bring the asking price and it will be sold for development if not sold as a going business; I am holding it for some qualified ex-serviceman.

GEORGE JENNINGS NURSERIES,
Ralston, N. J.

FOR SALE

20-acre nursery, specializing in specimen trees, shrubs and evergreens; on main highway, 35 miles from downtown Detroit, Mich.; 8-room modern house; garage and barns in excellent condition. Price, including equipment, \$70,000.00.

Address Box No. 387, care of American Nurseryman, 343 South Dearborn St., Chicago 4, Ill.

SITUATION WANTED

Young man, age 31, recently discharged from navy desires permanent position in Pacific northwest, experienced in handling men, field and landscape work, also some propagating; operated small nursery before war. Address Box No. 389, care of American Nurseryman.

SITUATION WANTED

Graduate landscape architect, age 32, married; 8 yrs. with one of the largest nurseries in Ohio; experience in landscape design, selling, supervisory work, nursery management, etc.; desires position with midwestern nursery; must be permanent. Address No. 388, care of American Nurseryman.

HELP WANTED

Expert tree climbers and tree trimmers. Good wages. References required, and state wages.

Address Box No. 377, care of American Nurseryman, 343 So. Dearborn St., Chicago 4, Ill.

HELP WANTED—Young working foreman with sales ability for well established greenhouse and nursery business in midwest. Good salary and housing. Give experience and references in first letter. Address Box No. 385, care of American Nurseryman.

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Buildings, including residence, land, equipment and stock. Invoices at \$28,419.25. Quick selling price, \$20,500.00.

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Le Mars, Ia.

FOR SALE—Will sell my nursery, stock, land and buildings; old-established nursery trade; 33 years in the business and wish to retire; no debts. BETHEL NURSERY, Ohio State Route 125, Bethel, O.

TEXAS A. A. N. CHAPTER.

Members of chapter 25 of the American Association of Nurserymen met at the Blackstone hotel, Fort Worth, Tex., December 11.

Called to order by the temporary chairman, Ross R. Wolfe, Stephenville, the assembly's initial action was election of these chapter officers for a term of two years: Murray P. Ramsey, Austin, president; Ray McCarter, Arlington, vice-president; Clark Kidd, Tyler, secretary-treasurer.

J. Frank Sneed, Oklahoma City, acting as A. A. N. committeeman at large and representing Oklahoma and Arkansas members in region V, proposed topics of business confronting this meeting.

Ross Wolfe was unanimously selected as executive committeeman to succeed Mr. Sneed.

Delegates named to represent this area on the A. A. N. board of governors for two years are Clark Kidd and Steve Verhalen, Scottsville. Murray Ramsey, the third delegate, was named for a one-year term.

As alternates to act in the absence of delegates E. L. Baker, Fort Worth, and Lee Mosty, Center Point, drew the longer terms, while Ray Verhalen, Scottsville, and Ray McCarter were named for one year.

Fort Worth won the chapter's approval for a possible convention site. New Orleans was reported to have refused to undertake the convention. Galveston, according to a telegram introduced by Mr. Wolfe, invited the association to meet there, but the available date was not acceptable.

Baker Bros. Nursery entertained visiting nurserymen at luncheon, where the group was joined by Harold Foster, of Fort Worth chamber of commerce.

Edward Baker introduced Mr. Foster, who extended his city's convention invitation, which won the recommendation of region V to the national organization. Mr. Foster promised a formal invitation to the A. A. N. and assured members of the ability of Fort Worth adequately to house and entertain the nurserymen.

An extensive public relations program proposed by an A. A. N. committee received close attention. All members present joined in discussion opened by the chapter president after a reading of the full plan. It was noted that region V delegates proceed to the board of governors' meeting uninstructed, but generally favoring the proposed program.

The following Texas firms were represented at this meeting by the persons named:

Baker Bros. Nursery, Fort Worth—J. B., E. L. and J. B. Baker, Jr. Blish Breland, Arlington.

H. E. Cannon Nursery & Floral Co., Arlington—Ray McCarter.

Andy Felps Nursery, Smithfield—A. L. Baker.

O. S. Gray Nursery, Arlington—O. S. Gray.

LaReunion Fruit Farms, Dallas—John Santerre.

Mosty Bros., Center Point—Lee Mosty.

Ramsey's Austin Nursery, Austin—Murray P. Ramsey.

Stuart Nursery, Gorman—J. H. Stuart.

Twitty Nursery, Texarkana—Robert S. Twitty.

Verhalen Nursery Co., Scottsville—Steve Verhalen.

Wolfe Nursery, Stephenville—Ross R. Wolfe.

Arp Nursery Co., Tyler—L. B. Dean, LaNelle and Clark Kidd.

Clark Kidd, Sec'y.

MAIL ORDER NURSERYMEN.

Directors Meet.

At a meeting of the board of directors of the National Mail Order Nurserymen's Association, held at Niles, Mich., December 14, applications for membership in the association were presented by the secretary from the following nurseries, which were elected to membership: Bobbink & Atkins, Inc., East Rutherford, N. J.; Benton County Nursery Co., Rogers, Ark.; Nelis Nurseries, Inc., Holland, Mich.; Cameron &

Co., Seattle, Wash.; Breedlove Nursery, Tyler, Tex.

Matters pertaining to the organization of mail-order nurserymen in the different regions covering the United States, as mapped out at the association's annual meeting at Chicago last July, were discussed. These different regions divide the country into five geographical sections. The regional representatives are as follows: Eastern—Homer Kemp, Princess Anne, Md.; central—Clifford Emlong, Stevensville, Mich.; southern—not chosen yet; southwestern—Hugh Wolfe, Stephenville, Tex.; western—Wayne Ferris, Hampton, Ia.; Pacific—Samuel J. Rich, Hillsboro, Ore.

Although membership in the National Mail Order Nurserymen's Association covers eighteen different states, active group organizations are now functioning in the eastern and central regions, with steps under way for the setting up of group organizations in the western and southwestern regions.

Members present representing the central region set dates for nine of the midwinter-spring meetings, which have been held within this group for the past twelve years. These midwinter-spring meetings are scheduled to begin February 8 and continue every two weeks until May 31; they are sponsored by different members, who act as hosts and furnish the food, entertainment and speakers for the evening.

Because of unfinished business, President Clifford Emlong called another meeting of the directors of

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the National Mail Order Nurserymen's Association for January 15, at 10 a. m., at the La Salle hotel, Chicago, Ill.

B. W. Keith, Sec'y-Treas.

MAIL-ORDER NURSERIES.

[Concluded from page 12.]

that they buy year after year. Not only that, but they tell their friends and get them to order, too. It bears out the old cliché, "A satisfied customer is the best advertisement."

To prepay or not to prepay, that is the question. You will have to decide as part of your policy. If you cast about for advice, you can get all you want, pro and con. Both methods have strong advocates. All we shall attempt to do here is to present the case for both sides.

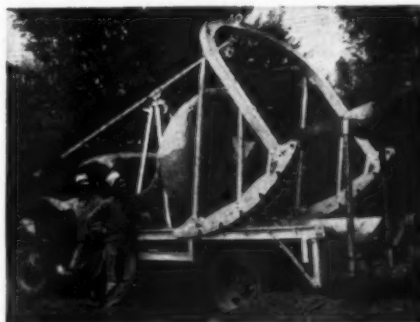
The larger mail-order houses of the country prepay practically all of the nursery stock that they offer. Their reason is simple: It is very difficult, in fact almost impossible, to estimate accurately the weight of nursery stock packed for shipment. Because of this, they cannot tell their customers how much to include in their remittance for transportation. When all items are shipped prepaid, bookkeeping is simplified. It is not necessary to keep any records of postage or freight and express charges. When nursery stock is shipped prepaid the purchaser knows exactly what it will cost when delivered to his home.

Mail-order nurseries that do not prepay their products point out that they can price their stock lower and so the customer feels he is getting better values. Prepaid prices are unfair to customers living near the nursery; they pay just as much as the buyer who lives at a great distance.

Some nurseries combine both methods. The lighter plants and smaller sizes are shipped prepaid, while on the heavier trees and larger sizes, the purchaser pays the transportation. Prices may be prepaid within certain territorial limits or within a given distance from the shipping point. Shipments beyond such limits would not be prepaid. You may be influenced somewhat by the practices of your competitors. If you are operating in a territory where most of the mail-order nurseries follow the practice of prepaying, it may be the best policy for you to do the same.

One of your most difficult jobs will be the pricing of items in your catalog. The usual tendency of beginners is to price too low. You must take into consideration all of the expenses involved in selling your products and

AUTOMOTIVE TREE MOVERS



These machines have been thoroughly tested, not only in our nursery, but by others during the war period. The simplicity in the operation of this mover, plus demountable features, cuts the cost of moving big trees. Write for particulars.



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WILLIAMS & HARVEY NURSERIES

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getting them into the hands of your customers. In addition to the initial cost of the nursery stock, some of the expenses to be considered are advertising, printing and mailing catalogs, wrapping, packing and shipping orders, transportation expense (if you decide to prepay) and office overhead. Be sure you charge enough for your stock to cover these and all other expenses and leave a reasonable margin of profit.

In order to make your position clear and to avoid misunderstanding with your customers, your catalog should state your policy in regard to guaranteeing nursery stock to grow. It is the opinion of the writer that there is no more reason for guaranteeing nursery stock to grow than there is to guarantee survival of a shipment of baby chicks or the germination of a package of cucumber seeds. If you send your customer good stock, well packed, your responsibility should end there because you have no control over it after it leaves your hands. For all you know, its failure to grow may be due to leaving the package out in the garage for two weeks or on account of pasturing the family goat on it.

Regardless of your sentiments about guaranteeing nursery stock to grow, you are faced with the fact

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that it is a pretty well established custom among mail-order nurserymen to make some sort of guarantee. These guarantees range all the way from free replacement to replacement at half price. Some of them do not go beyond delivery in good condition. For their own protection most nurseries establish a deadline after which adjustments will not be made. We suggest that you study the guarantees of several mail-order nurserymen and then decide which suits you the best or displeases you the least.

RICHARD PILKINTON, army air corps veteran, is ready to start his nursery business, one-half mile south of Sheridan, Mich. He has 20,000 seedling trees planted.

TREE (creped) WRAP

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4 inches wide—150 lineal feet to roll.

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Packing and Shipping Supplies for the Nurseryman

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NEW JERSEY SHADE TREE MEETING.

[Continued from page 17.]

poison ivy. Best results with this material are secured when the plants are making most active growth, between early June and mid-August. Early morning or evening sprayings give better results than those made at midday, when the temperatures are higher.

One of the original sponsors of the New Jersey certified tree expert law, Winston Parker, of Moorestown, and a member of the state examining board, who recently returned from the armed services, pleaded for the cooperation of the federation in helping to put over the objectives of the law. More recognition of certified tree experts would accrue, he said, if a greater number of the municipal shade tree officials would take and pass the examination. An examination for new candidates would be given in the near future, he concluded.

A refresher course on the present status of the canker disease of planes was given by Dr. P. P. Pirone in the absence of the scheduled speaker, Dr. James Walter, of the U.S.D.A. A new U.S.D.A. bulletin prepared by Dr. Walter on all phases of this disease will be available within a few weeks.

Dr. Hadley presented the latest on the Japanese beetle situation. He pointed out that although some of the decrease in beetle population during recent years was probably due to two continuous dry summers, some of the decrease is definitely due to an increase in the parasite population of this pest. He stated that 120,000 pounds of spore dust have been made to date, and this amount has been used on 8,000 acres of turf in thirteen states. He said that twenty-five pounds of DDT per acre give nearly 100 per cent control of grubs. Because this amount is too small to distribute evenly on an acre, he



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recommended that 250 pounds of a ten per cent DDT dust be used to insure proper distribution.

A spray of one pound of DDT in 100 gallons of water will control adult beetles provided no new leaf growth occurs. With plants such as grape, where new leaves are formed after the first spray is applied, it is necessary to make additional sprays to keep such foliage protected.

Dr. Hugh Findlay, retired professor of landscape architecture at Columbia University, addressed the group at the annual banquet in the evening. His intensely interesting talk on the beauty and value of trees throughout recorded history was amply illustrated with slides.

PLANT NOTES.

[Continued from page 19.]

have spent hours and much money trying to keep them clothed in presentable herbage. A case in point is a friend who had a dry southern slope which he found difficult to handle. He tried trailing roses, but found them unsuited in many ways; then he tried garden pinks and had to give them up because of leaf spot. At my suggestion about five years ago, he planted several hundred small plants of *Armeria maritima lauchiana* and has found that to be an almost perfect solution. During the five years, there has been practically no upkeep, except for an occasional splitting up of a plant to replace casualties. For that little work, and an over-all clipping of the seed heads after flowering, he has a year-around green carpet and, over the long blooming season, a veritable sea of bright pink flowers.

In another garden that I know the same thrift has been used by the hundreds as edging to replace the lifeless stones which were formerly used. There is a little more upkeep in this case, because the plants are closer to the onlooker and must have more attention. These two instances will, I hope, indicate other uses for this useful group of plants.

Veronica Exaltata.

I have been disappointed with speedwells so often that I always look on a new one with a certain amount of misgiving, for poor veronicas can be about as worthless as any plants I know. But when they are good they are something to sing about. A few years ago when an American friend sent me seeds of *V. exaltata* I had that uncertain feeling inside which often presages something unpleasant in the offing. I had

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CLOVERSET POTS will help you grow better plants.

Our pots enable you to sell throughout the summer months, even during the hottest weather, without any wilt of either foliage or the bloom, since plants can be moved without disturbing the root system.

Cloverset potted stock will promote planting interest, bringing ease to the gardener, and will increase cash-and-carry trade, making selection of stock easy, quick and a pleasure for your customer. Try our Cloverset Pots; we are sure they will please you.

Write for free circulars and catalog giving description, size and price lists and technical instructions for use. Sample carton, all sizes, standard heavy weight, 25c. Write today, send your problems, inquiries and requests for information and we will try to assist you from our experience and the experiences of users throughout the country.

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1	6 1/2 ins.	6 ins.	5 1/2 ins.	9 lbs.	7-in. 52 lbs.	4.00	35.00
2	9 1/2 ins.	7 ins.	6 1/2 ins.	15 lbs.	8-in. 77 lbs.	4.50	40.00
3	9 ins.	8 ins.	7 1/2 ins.	20 lbs.	9-in. 88 lbs.	5.00	45.00

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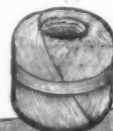
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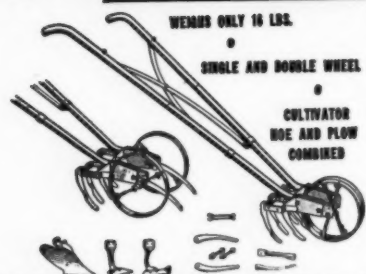
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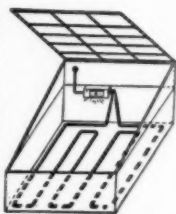
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all my fussing for no good reason, though, for when it flowered the next year, I had one of my pleasant surprises in the veronica group. What I remembered reading about the plant—a rough plant of sparse flowering habit from Siberia—was probably at the bottom of my misgivings. What I had read was not half true; in fact, the only true part was that it is from Siberia. It is not coarse, even though it may get four feet tall and has coarsely serrated leaves. On the other hand, it is one of the better speedwells, not only because of its pretty blue flowers in long spikes, but also for its late flowering (late August and early September here). I suspect it could be made to stretch up to five feet with a little persuasion in the form of a very fertile soil, and it would then be a spectacular plant. Even with ordinary care it is a grand landscape plant, and in keeping with most other tall speedwells, it is not to be ignored as a cut flower. Coming from Siberia, it should be able to stand any cold of the northern states.

Saxifraga Peltata.

Years ago a friend with much planting space to be filled and plenty of money to do the filling asked my advice about the planting of a stream bank. He wanted something out of the ordinary as well as spectacular. After some thought, I recommended the umbrella plant, *Saxifraga peltata*, with the suggestion that it might not be hardy. The gamble was made, anyway, and several dozen plants were ordered from the Pacific northwest. I was almost afraid to ask about the results the following year, but could have spared myself the worry, because they not only came through that winter, but continue vigorous to this date—more than fifteen years.

This saxifrage is a plant of noble proportions. Its flowers, either pinkish or white, come on simple scapes in early spring before the leaves and are quite inconspicuous. Its fortune is found in its leaves, all of which are basal from a horizontal rhizome and are borne on petioles as much as three feet long. The leaves, as the specific name indicates, are attached to the stalk inside the margin and may be as much as a foot across; hence the name, umbrella plant. It needs some protection in this section if planted in exposed situations, though it has been perfectly hardy in the situation mentioned before, which included the constant moisture of a stream bank, the protection from sun and wind provided by a deciduous woodland and the winter protection of its fallen leaves. It is easily

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propagated by division of the rhizome.

Asphyllanthes Monspelienensis.

Growers of rock garden plants who are looking for unusual items with which to attract customers have an ally in *Asphyllanthes monspeliensis*, a cousin of the lilies. It has pretty glaucous gray rushlike foliage from eight inches to a foot or more high and small blue fairies at the ends of the stems. The plants are for thoroughly drained soil, preferably on the sterile side, according to experience here, and for a situation in full sun. Being a native of warm Mediterranean regions, it is not reliably hardy this far north, except in well protected places with mulch. It seems to be of about the same hardiness as the California *sisyrinchium*. Propagation is by means of seeds, which should be planted outdoors in autumn.

MEETING AT PITTSBURGH.

[Continued from page 15.]

erymen's Association, discussed the growing of roses. His remarks were short and to the point. He stated that it was better to plant in the spring, since the soil conditions were better than in autumn. He suggested the planting of roses close together, fifteen inches apart. His philosophy is that foliage will shade the ground and that more blooms will be produced per plant. Roses respond to good treatment. They should not have wet feet and should be planted in a loam soil of good texture. He insisted that one should not be afraid of watering and that it does not hurt roses to be watered in the evening, contrary to the popular idea.

When the nurseryman recommends to the homeowner that he spray his roses, the homeowner will probably spray only once or twice. Mr. Wyant asserted that if a good dusting is applied by the customer to the roses, he will have good results. One should not spray by the calendar, but should determine the proper time to spray or dust by watching the weather conditions. He suggested that one should dust only when there is no wind and in the evening. The dust which is used should be a multiple-dust or one which controls insects and diseases both.

If rose plants are grown well, one should not have to provide winter protection. Check beds at his nursery showed unmulched plants came through the winter as well as, or better than, other roses in beds which



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had been protected. As a food Mr. Wyant suggested the use of bone meal applied at planting time. A handful should be sufficient for each plant. Later a well balanced plant food should be applied several times during the growing season. If possible an organic fertilizer should be used.

In pruning Mr. Wyant suggested that only those branches which are dead should be removed during the spring.

At 6:30 p. m. a buffet supper was served. Four acts of entertainment followed, after which Hal H. Harrison, Tarantum, a nationally known photographer and lecturer, gave a most enlightening talk on "Teeming Life at Pymatuning," illustrating his talk with Kodachrome slides in natural colors. His talk concerned many of the beautiful plants and birds found in the marshes of that man-made lake separating Pennsylvania and Ohio near the Crawford county line. Most of the plants and birds were unknown by his listening audience.

During the regular meeting Dr. E. I. Wilde, head of the department of floriculture; Associate Professor R. P. Meahl, and Prof. A. O. Rasmussen, extension specialist in ornamental horticulture, all of Pennsylvania State College, were called upon for remarks. Professor Rasmussen supplied the nurserymen with information concerning his state-wide ornamental horticultural extension activities.

Lieut. A. F. DeWerth, just back from China, and J. K. Loeb, now in civilian clothes after a stretch in Africa and Italy, also responded briefly.

At the close of the afternoon session, James A. Hyslop, of the McDowell Manufacturing Co., Pittsburgh, presented a new type of irrigation system. He showed samples of a patented coupling that required only a turn of the wrist to hook up two lengths of pipe and a spray nozzle that covered an area fifty feet in diameter. This system will be on the market next spring.

Directors for the year 1946 were elected as follows: John Busch, John Eisler, Stanley Leonard, Walter Morrow, Burt Smith, Louis Wissenbach and Charles Zimmerman.

FLOYD BASS, JR., and Kaye Bass, sons of Mr. and Mrs. Floyd Bass, New Augusta, Ind., were both discharged from military service in October. Both were lieutenants in the army air force. Floyd, Jr., is back at Purdue University, and Kaye expects to enter for the March 1 term.

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